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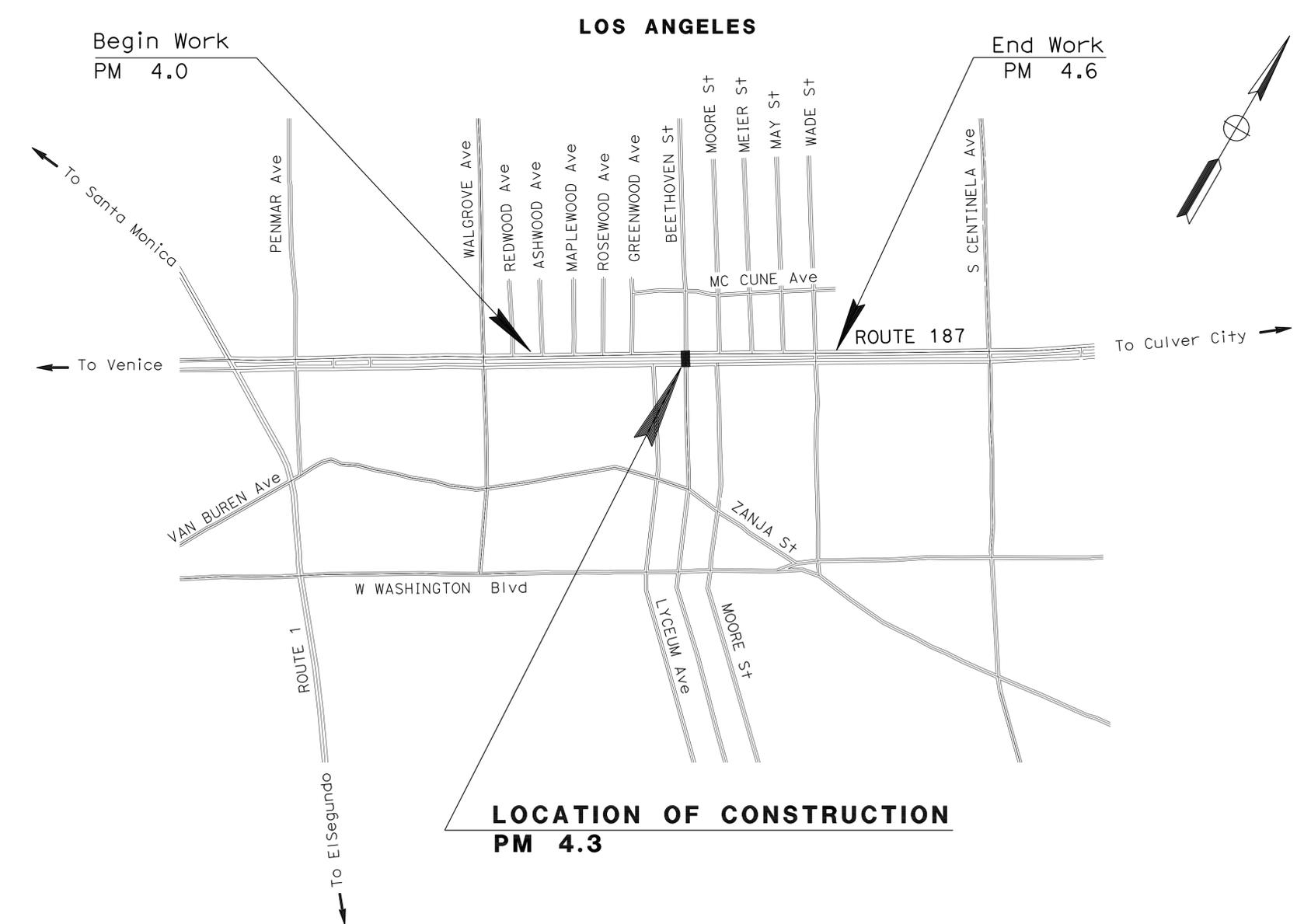
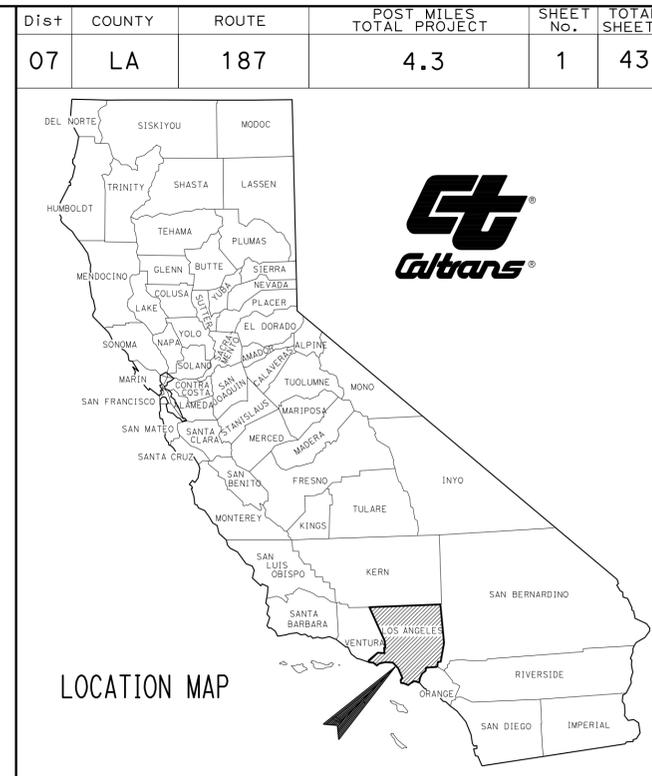
THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISIONS BOOK.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ACSTP-P187(002)E

PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN LOS ANGELES COUNTY
IN LOS ANGELES
AT BEETHOVEN STREET

TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006



PROJECT MANAGER	ERIC WANG
DESIGN ENGINEER	Y. SHADROOZ

Cesar Hernandez 1/11/11
PROJECT ENGINEER DATE
REGISTERED ELECTRICAL ENGINEER

March 7, 2011
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

CONTRACT No.	07-4T2804
PROJECT ID	0700001869

THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."

NO SCALE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: MOHAMMED CHOWDHURY
 CALCULATED/DESIGNED BY: MOHAMMED HAIDER
 CHECKED BY: FRANCISCO MARTINEZ
 REVISED BY: MOHAMMED HAIDER
 DATE REVISED:

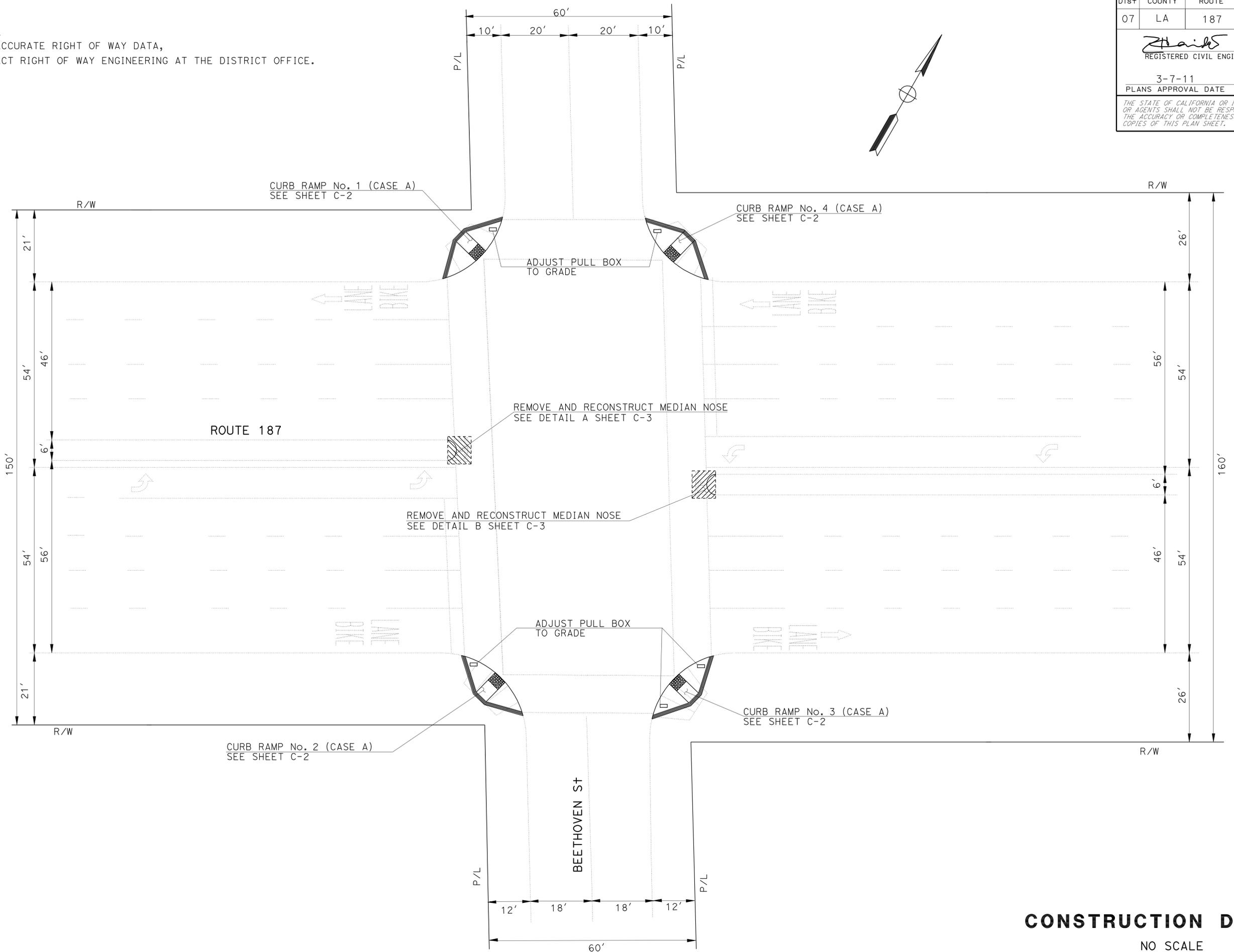
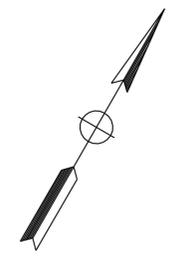
NOTE:
 FOR ACCURATE RIGHT OF WAY DATA,
 CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	187	4.3	2	43

REGISTERED CIVIL ENGINEER: *Mohammed Haider* DATE: 1/11/11
 No. 61335 Exp. 6/30/11
 PLANS APPROVAL DATE: 3-7-11

REGISTERED PROFESSIONAL ENGINEER: MOHAMMED HAIDER
 STATE OF CALIFORNIA CIVIL

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



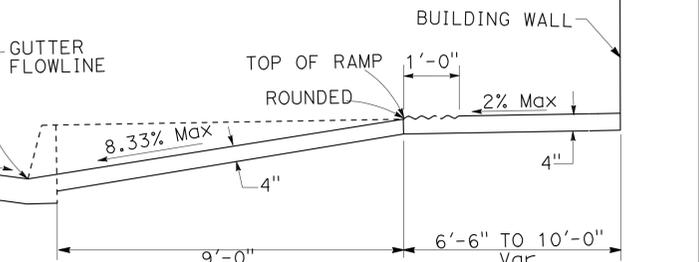
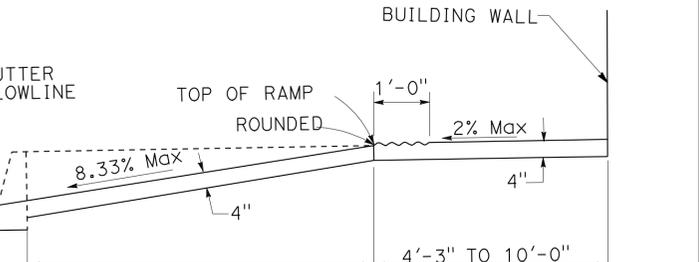
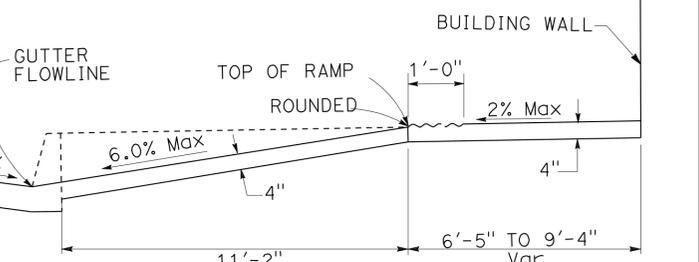
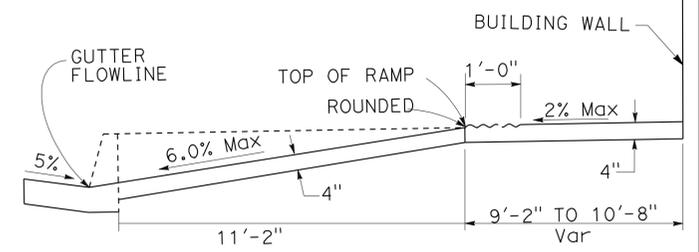
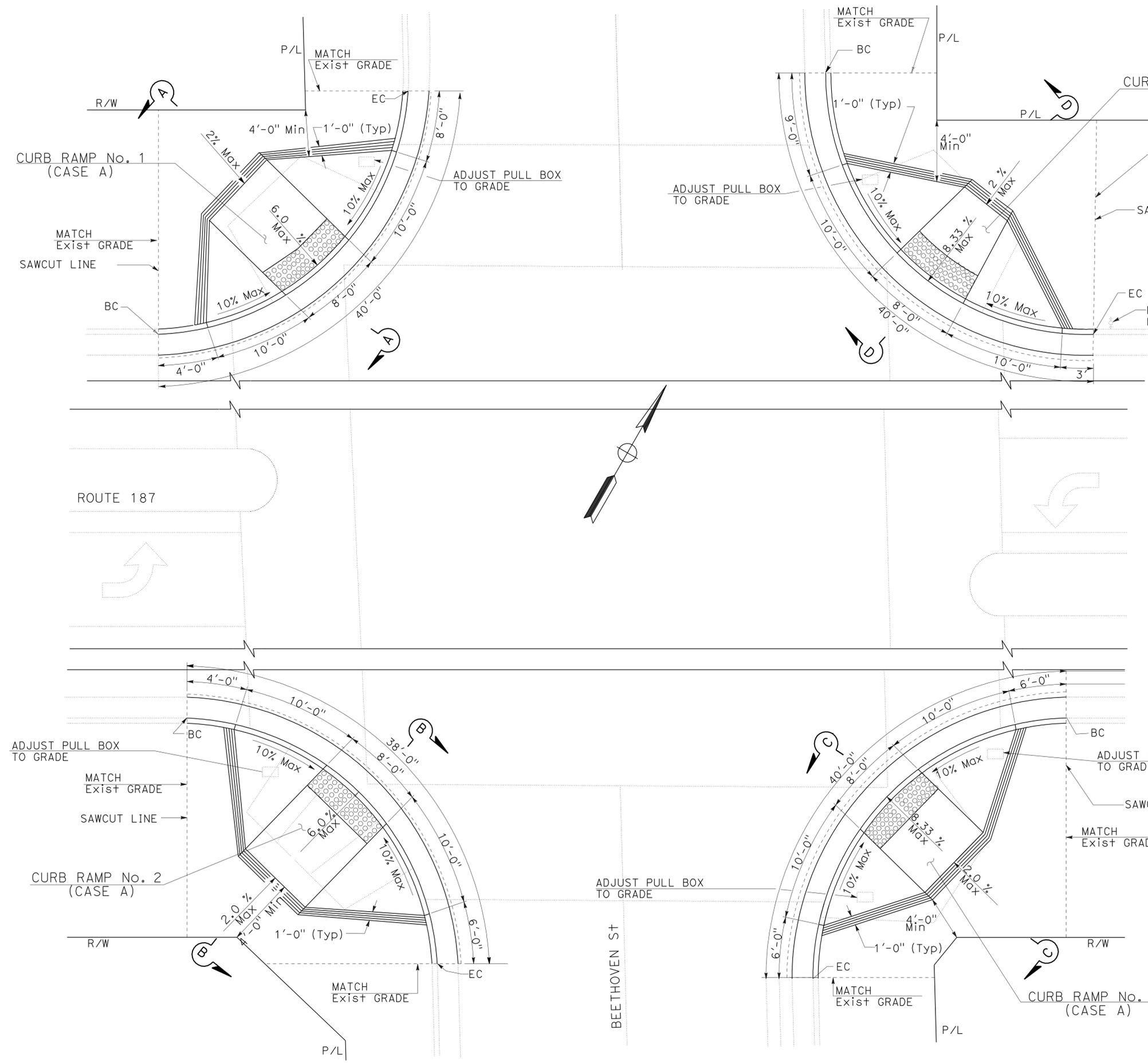
CONSTRUCTION DETAILS
 NO SCALE **C-1**

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	187	4.3	3	43

<i>Thaib</i>	1/11/11
REGISTERED ELECTRICAL ENGINEER	DATE
3-7-11	PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
MOHAMMED HAIDER
No. 61335
Exp 6/30/11
CIVIL
STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



CONSTRUCTION DETAILS
NO SCALE **C-2**

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT DISTRICT OFFICE.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: MOHAMMED CHOWDHURY
DESIGNED BY: FRANCISCO MARTINEZ
CHECKED BY: MOHAMMED HAIDER
REVISOR: FRANCISCO MARTINEZ
DATE: 7/1/2010

USERNAME => fmmartin
DGN FILE => 74t280ga02.dgn

RELATIVE BORDER SCALE IS IN INCHES

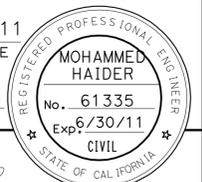
UNIT 2124

PROJECT NUMBER & PHASE

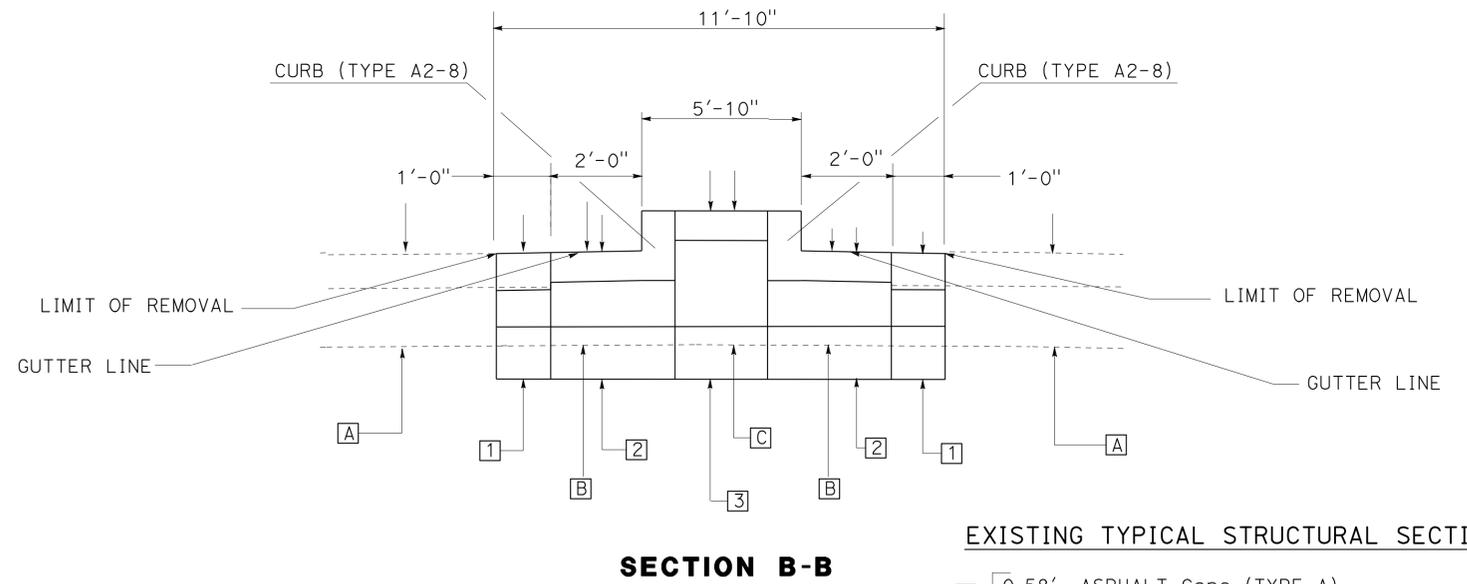
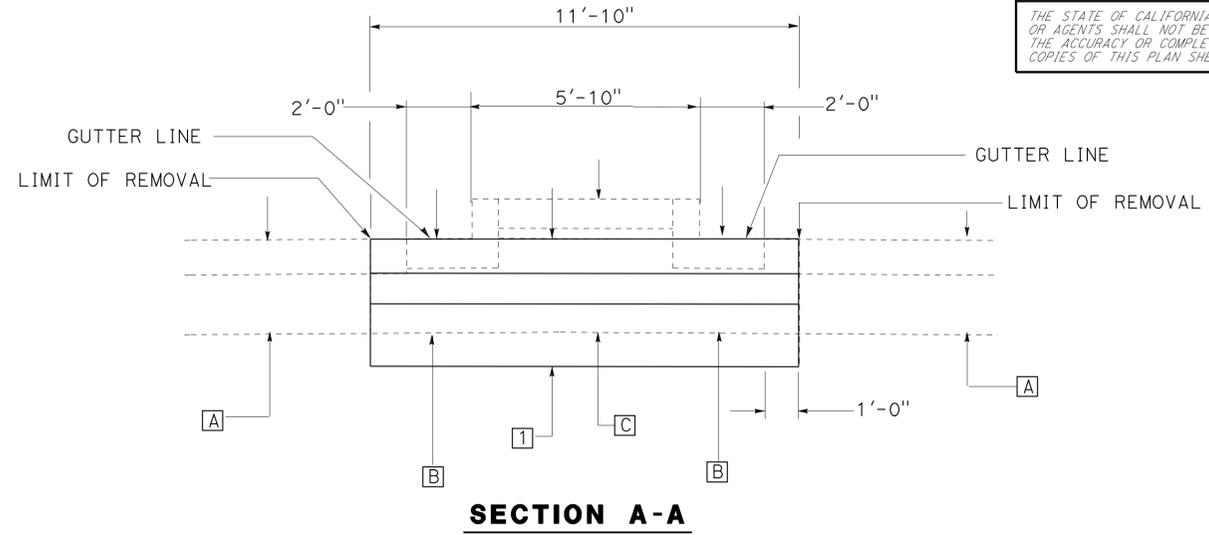
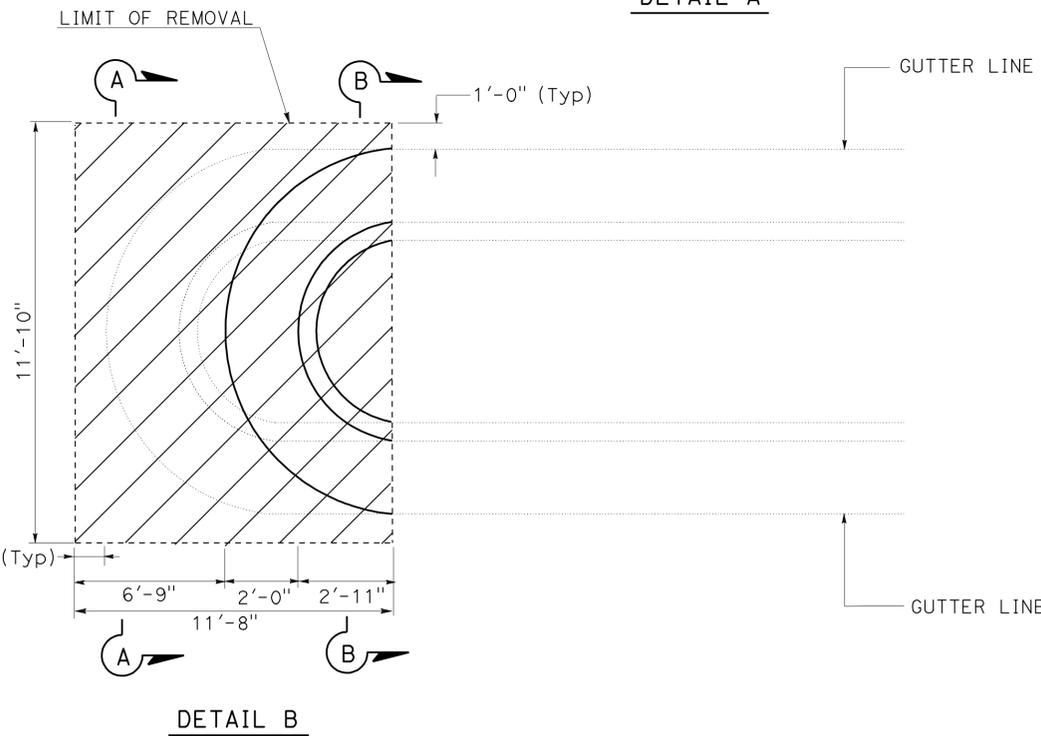
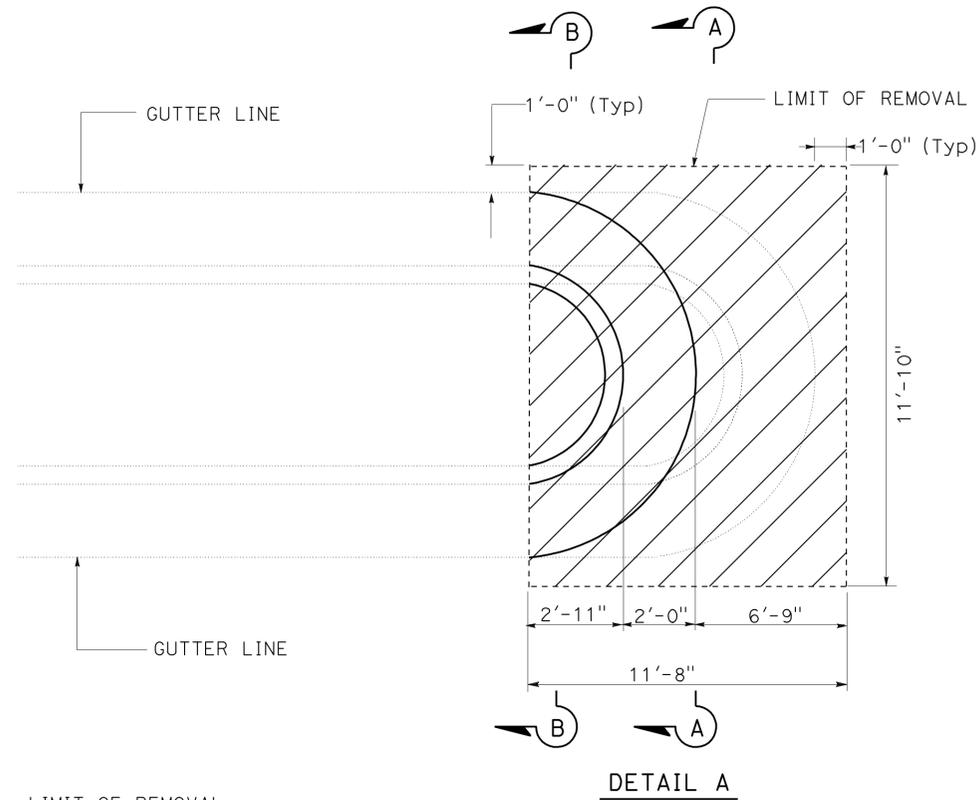
07000118691

LAST REVISION: DATE PLOTTED => 07-MAR-2011
TIME PLOTTED => 14:57

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	187	4.3	4	43
		REGISTERED CIVIL ENGINEER		DATE	
		3-7-11		PLANS APPROVAL DATE	
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.					



NOTE:
DIMENSIONS OF PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.



EXISTING TYPICAL STRUCTURAL SECTIONS

- A 0.58' ASPHALT Conc (TYPE A)
1.0' CLASS 2 AGGREGATE BASE
- B 0.50' MINOR Conc (GUTTER)
1.08' CLASS 2 AGGREGATE BASE
- C 0.50' MINOR Conc (ISLAND PAVING)
0.75' ASPHALT Conc (TYPE A)
1.0' CLASS 2 AGGREGATE BASE

PROPOSED TYPICAL STRUCTURAL SECTIONS

- 1 0.55' MINOR HOT MIX ASPHALT
0.55' LEAN Conc BASE
1.0' CLASS 3 AGGREGATE BASE
- 2 0.50' MINOR Conc (GUTTER)
0.60' LEAN Conc BASE
1.0' CLASS 3 AGGREGATE BASE
- 3 0.50' MINOR Conc (ISLAND PAVING)
1.15' LEAN Conc BASE
1.0' CLASS 3 AGGREGATE BASE

LEGEND:

REMOVE AND RECONSTRUCT RAISED MEDIAN, GUTTER AND ROADWAY PAVEMENT.

CONSTRUCTION DETAILS
NO SCALE

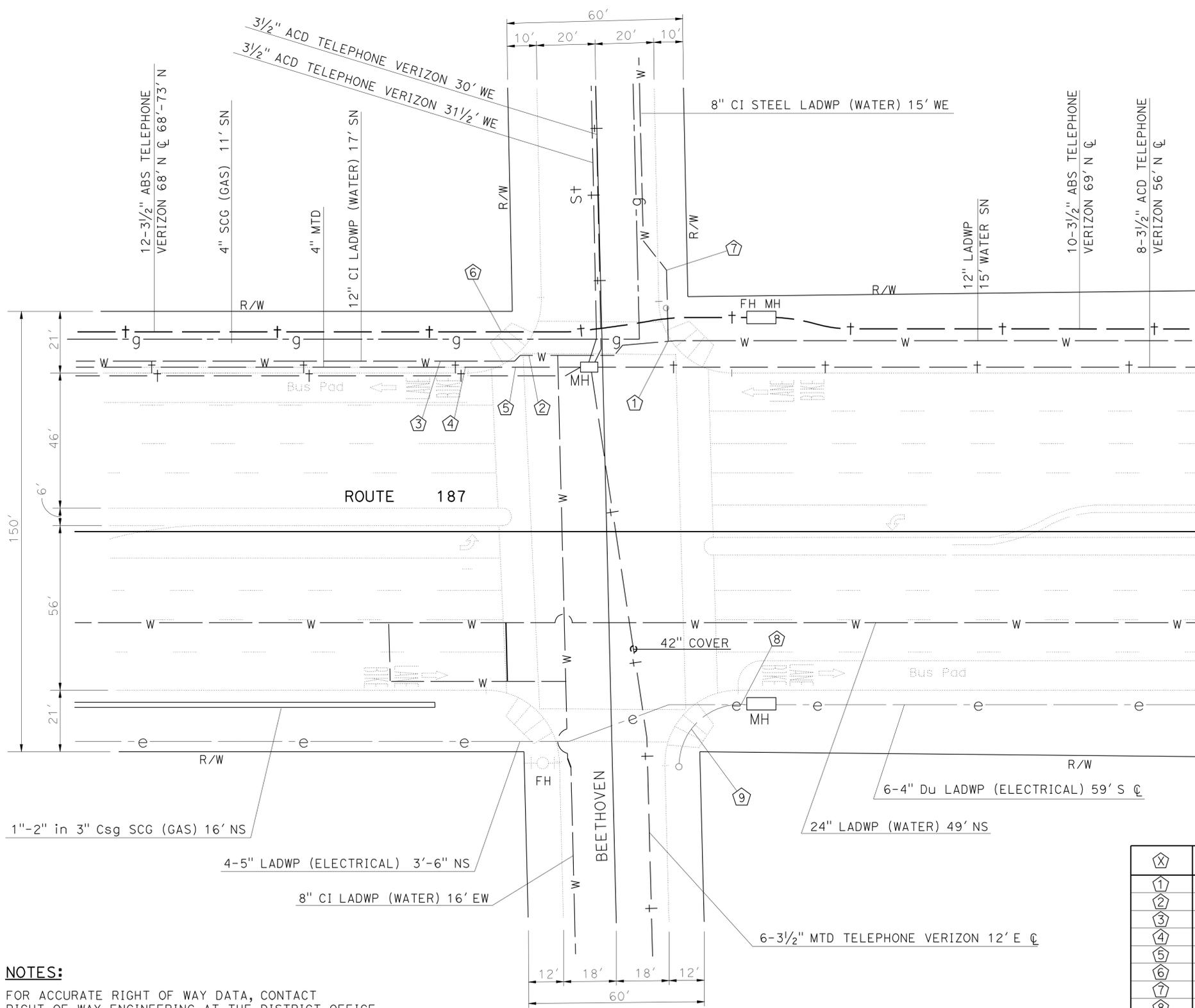
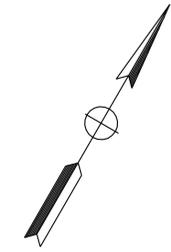
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Francisco Martinez
Mohammed Chowdhury
Traffic Design

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	187	4.3	5	43

Parviz Yaganeh 1/11/11
 REGISTERED CIVIL ENGINEER DATE
 3-7-11
 PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER
 PARVIZ YAGANEH
 No. C53797
 Exp. 6/30/11
 CIVIL
 STATE OF CALIFORNIA



POSITIVE LOCATION INFORMATION

MARKER	UTILITY	NORTHING	EASTING	UTILITY Elev	DEPTH
1	WATER LINE	1822677.12	6427912.01	45.34	3.1'
2	WATER LINE	1822646.01	6427871.66	44.87	3.4'
3	WATER LINE	1822634.39	6427854.84	45.27	4.1'
4	TELEPHONE	1822628.07	6427852.11	45.15	2.4'
5	TELEPHONE	1822637.31	6427867.50	44.68	1.6'
6	TELEPHONE	1822638.70	6427862.15	45.37	3.3'
7	WATER LINE	1822690.42	6427904.09	46.06	3.5'
8	ELECTRICAL CONCRETE CASING	1822585.33	6428003.68	44.80	4.0'
9	ELECTRICAL	1822570.89	6427989.30	44.68	1.7'

- NOTES:**
- FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
 - LOCATIONS OF UTILITY FACILITIES SHOWN ON THESE PLANS ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
 - UTILITY OWNERSHIP ON THIS PROJECT:
 - WATER - LOS ANGELES DEPARTMENT OF WATER & POWER (LADWP)
THE METROPOLITAN WATER DISTRICT (MWD)
CITY OF TORRANCE, DOMINGUEZ WATER CORPORATION
 - GAS - SOUTHERN CALIFORNIA GAS COMPANY (SCG)
 - ELECTRICAL - LOS ANGELES DEPARTMENT OF WATER & POWER(LADWP)
- SOUTHERN CALIFORNIA EDISON (SCE)
 - TELEPHONE - VERIZON

- ABBREVIATION:**
- ABS ASBESTOS
 - ACD ASBESTOS CEMENT DUCT
 - MTD MULTIPLE TITLE DUCT
 - DU DUCT
 - Csg CASTING

THIS PLAN IS ACCURATE FOR UTILITY INFORMATION ONLY.

UTILITY PLAN
 SCALE: 1" = 20'
U-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR HAYKAZ AGHAJANIAN
 CALCULATED/DESIGNED BY CESAR HERNANDEZ
 CHECKED BY MITRA VAHEDI
 REVISED BY DATE REVISIONS

LAST REVISION DATE PLOTTED => 07-MAR-2011
 00-00-00 TIME PLOTTED => 14:57

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	187	4.3	6	43

1/11/11
 REGISTERED CIVIL ENGINEER DATE
 3-7-11
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
 MOHAMMED HAIDER
 No. 61335
 Exp. 6/30/11
 CIVIL
 STATE OF CALIFORNIA

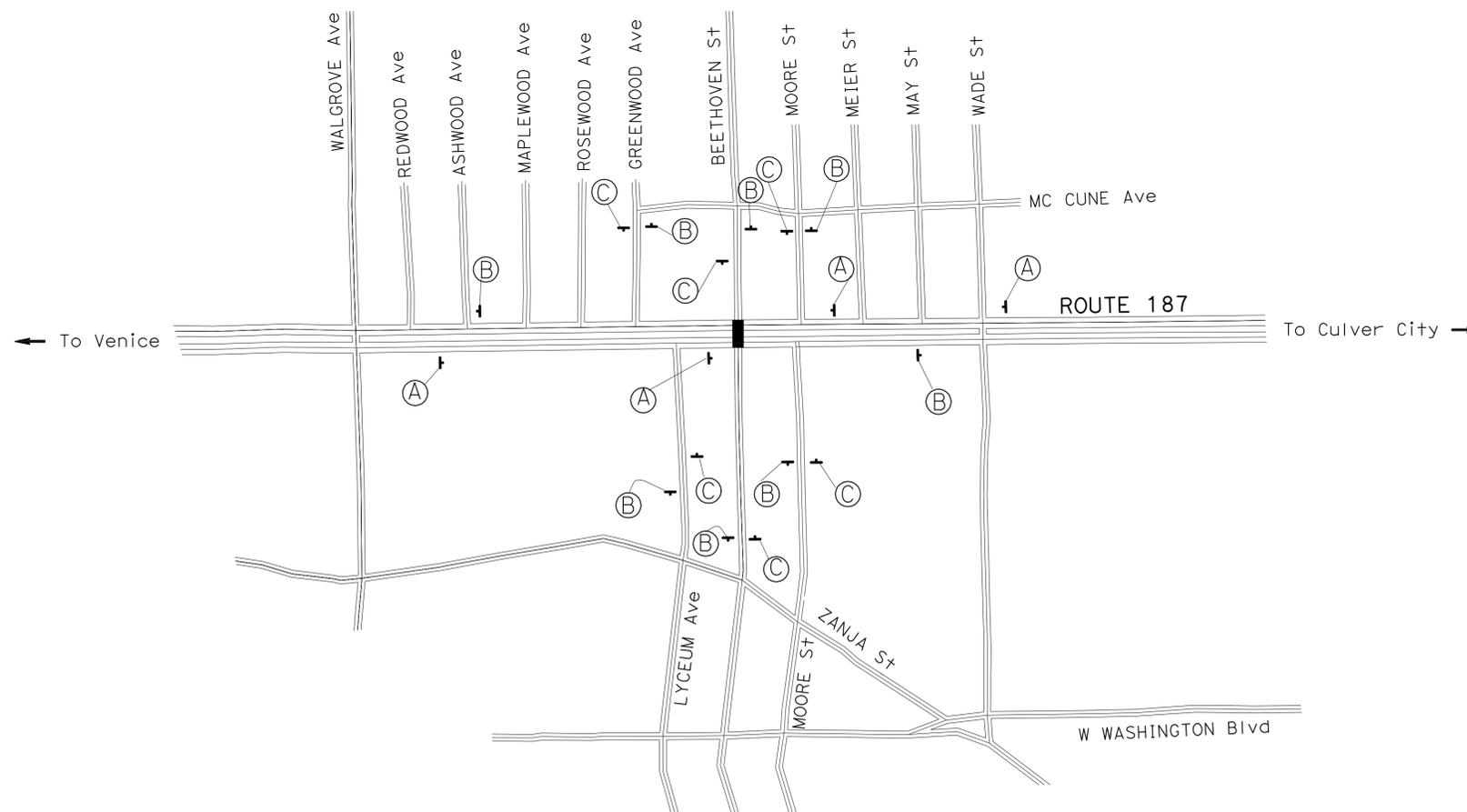
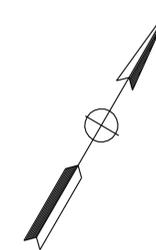
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

- EXISTING UTILITY FACILITIES HAVE NOT BEEN PLOTTED ON THIS PLAN.
- LOCATIONS OF CONSTRUCTION AREA SIGNS SHOWN ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN No.	SIGN CODE	PANEL SIZE	No. OF POSTS AND SIZE	SIGN MESSAGE	No. OF SIGNS
Ⓐ	W20-1	36" X 36"	1 - 4" X 6"	ROAD WORK AHEAD	4
Ⓑ	G20-2	36" X 18"	1 - 4" X 6"	END ROAD WORK	8
Ⓒ	W20-1	36" X 18"	1 - 4" X 6"	ROAD WORK AHEAD	6



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR
 MOHAMMED CHOWDHURY

CALCULATED/DESIGNED BY
 CHECKED BY

FRANCISCO MARTINEZ
 MOHAMMED HAIDER

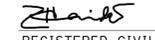
REVISED BY
 DATE REVISED

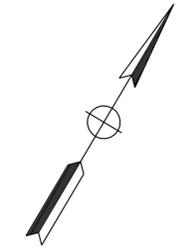
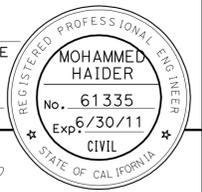
THIS PLAN IS ACCURATE FOR CONSTRUCTION AREA SIGN WORK ONLY.

CONSTRUCTION AREA SIGNS

NO SCALE

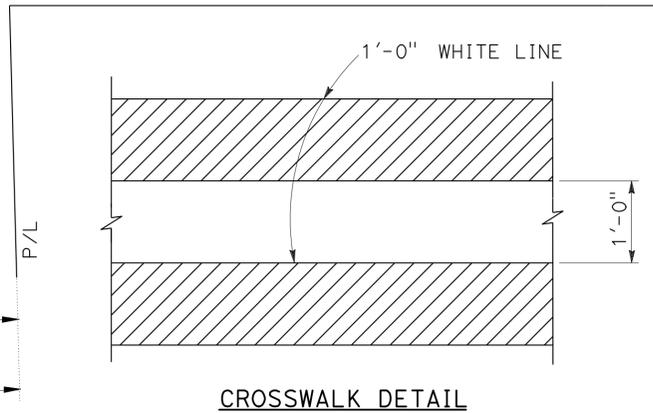
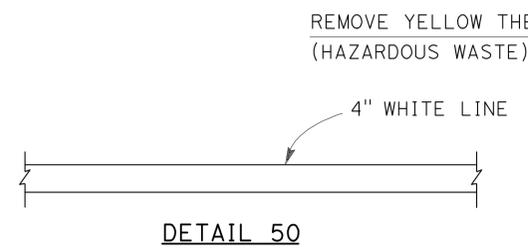
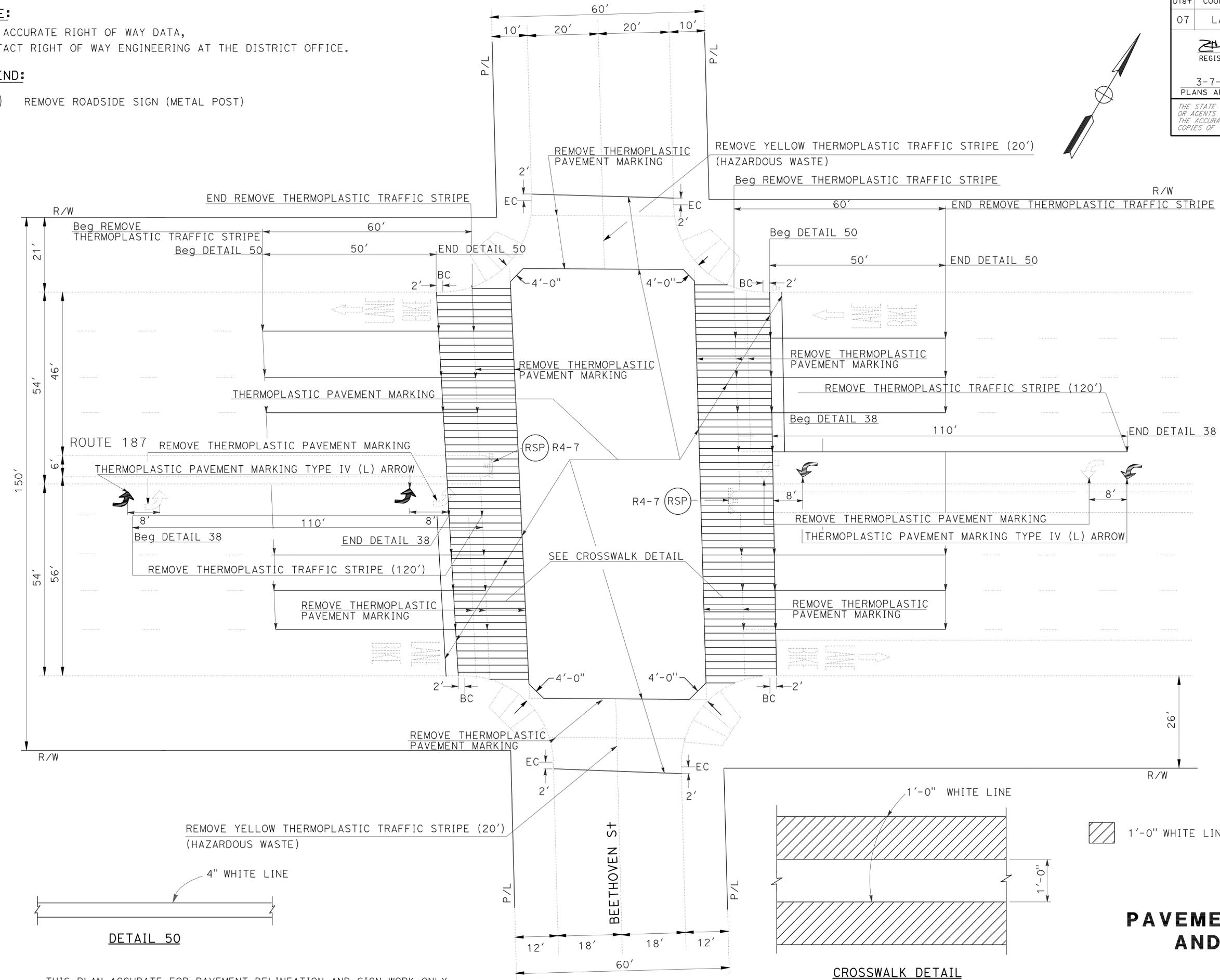
CS-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	187	4.3	8	43
			1/11/11	DATE	
REGISTERED CIVIL ENGINEER			DATE		
3-7-11			PLANS APPROVAL DATE		
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					



NOTE:
FOR ACCURATE RIGHT OF WAY DATA,
CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

LEGEND:
RSP REMOVE ROADSIDE SIGN (METAL POST)



PAVEMENT DELINEATION AND SIGN PLAN
NO SCALE

PD-1

THIS PLAN ACCURATE FOR PAVEMENT DELINEATION AND SIGN WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FRANCISCO MARTINEZ	REVISOR
Caltrans TRAFFIC DESIGN	MOHAMMED HAIDER	DATE
FUNCTIONAL SUPERVISOR	MOHAMMED CHOWDHURY	CHECKED BY
		DESIGNED BY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR: MOHAMMED CHOWDHURY
 CALCULATED/DESIGNED BY: FRANCISCO MARTINEZ
 CHECKED BY: MOHAMMED HAIDER
 REVISIONS: REVISED BY: FRANCISCO MARTINEZ, DATE: 1/11/11
 DATE: 7/1/2010

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	187	4.3	9	43

1/11/11
 REGISTERED CIVIL ENGINEER DATE
 3-7-11
 PLANS APPROVAL DATE

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ROADWAY QUANTITIES

LOCATION	REMOVE CONCRETE		ROADWAY EXCAVATION	CLASS 3 AGGREGATE BASE	MINOR HOT MIX ASPHALT	MINOR CONCRETE			LEAN CONCRETE BASE	(N)	RAISED TRUNCATED DOME	TEMPORARY DRAINAGE INLET PROTECTION	ADJUST PULL BOX TO GRADE
	(CURB, SIDEWALK AND CURB RAMP)	ISLAND PAVING				(CURB, GUTTER, SIDEWALK & DRIVEWAY)	CURB RAMP	ISLAND PAVING					
CURB RAMP No. 1	8.6		8.6			6.2	2.4				24.0	1	1
CURB RAMP No. 2	8.7		8.7			6.3	2.4				24.0	1	1
CURB RAMP No. 3	8.9		8.9			6.9	2.0				24.0	1	2
CURB RAMP No. 4	9.1		9.1			7.1	2.0				24.0	1	1
RAISED MEDIAN	3.8	1.2	25.3	10.6	5.0	3.0		0.2	5.5				
SUBTOTAL	39.1	1.2	60.6	10.6	5.0	29.5	8.8	0.2	5.5			4	5
TOTAL	40.3		60.6	10.6	5.0	38.5			5.5			4	5

(N) NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY.

PAVEMENT DELINEATION QUANTITIES

PLAN SHEET No.	THERMOPLASTIC TRAFFIC STRIPE		THERMOPLASTIC PAVEMENT MARKING			PAVEMENT MARKER (RETROREFLECTIVE)	REMOVE			
	4"	8"					THERMOPLASTIC TRAFFIC STRIPE	YELLOW THERMOPLASTIC TRAFFIC STRIPE (HAZARDOUS WASTE)	THERMOPLASTIC PAVEMENT MARKING	PAVEMENT MARKER
	DETAIL 50	DETAIL 38	ARROW	STOP BAR	CROSSWALK	TYPE G	LF	LF	SQFT	EA
	WHITE	WHITE	SQFT	SQFT	SQFT	EA	LF	LF	SQFT	EA
PD-1	600	220	60	92	3434	12	1200	40	800	12
TOTAL	600	220	3586			12	1200	40	800	12

ROADSIDE SIGN QUANTITIES

PLAN SHEET No.	SIGN CODE	ROADSIDE SIGN	
		INSTALL	REMOVE
		(N) MAST ARM HANGER METHOD	METAL POST
PD-1	R4-7	2	2
TOTAL			2

(N) NOT A SEPARATE PAY ITEM, FOR INFORMATION ONLY. (SEE ELECTRICAL PLANS FOR LOCATION)

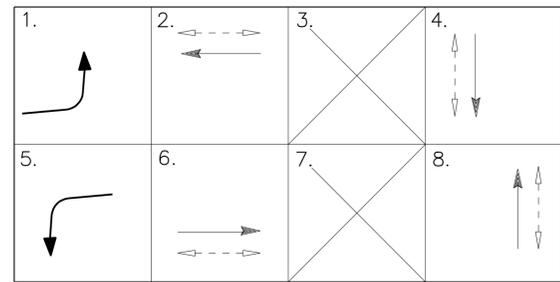
SUMMARY OF QUANTITIES

Q-1

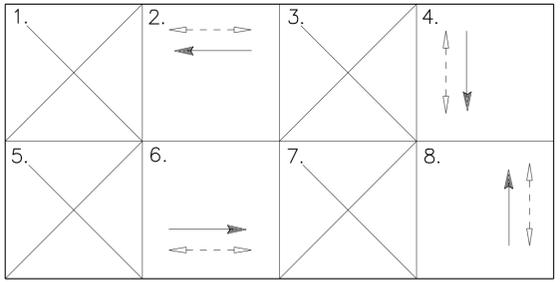
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	187	4.3	10	43
			1/11/11	DATE	
REGISTERED ELECTRICAL ENGINEER			No. 15805		
3-7-11			Exp! 2/31/12		
PLANS APPROVAL DATE			ELECTRICAL		
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

NOTES:
1. SEMI-ACTUATED OPERATION WITH ATSAC CAMERA (ATSAC 2070 CONTROLLER)
Ø1 - VENICE Blvd EB Lt
Ø2 - VENICE Blvd WB & NS Ped XING
Ø4 - BEETHOVEN St SB & WS Ped XING
Ø5 - VENICE Blvd WB Lt
Ø6 - VENICE Blvd EB & SS Ped XING
Ø8 - BEETHOVEN St NB & ES Ped XING

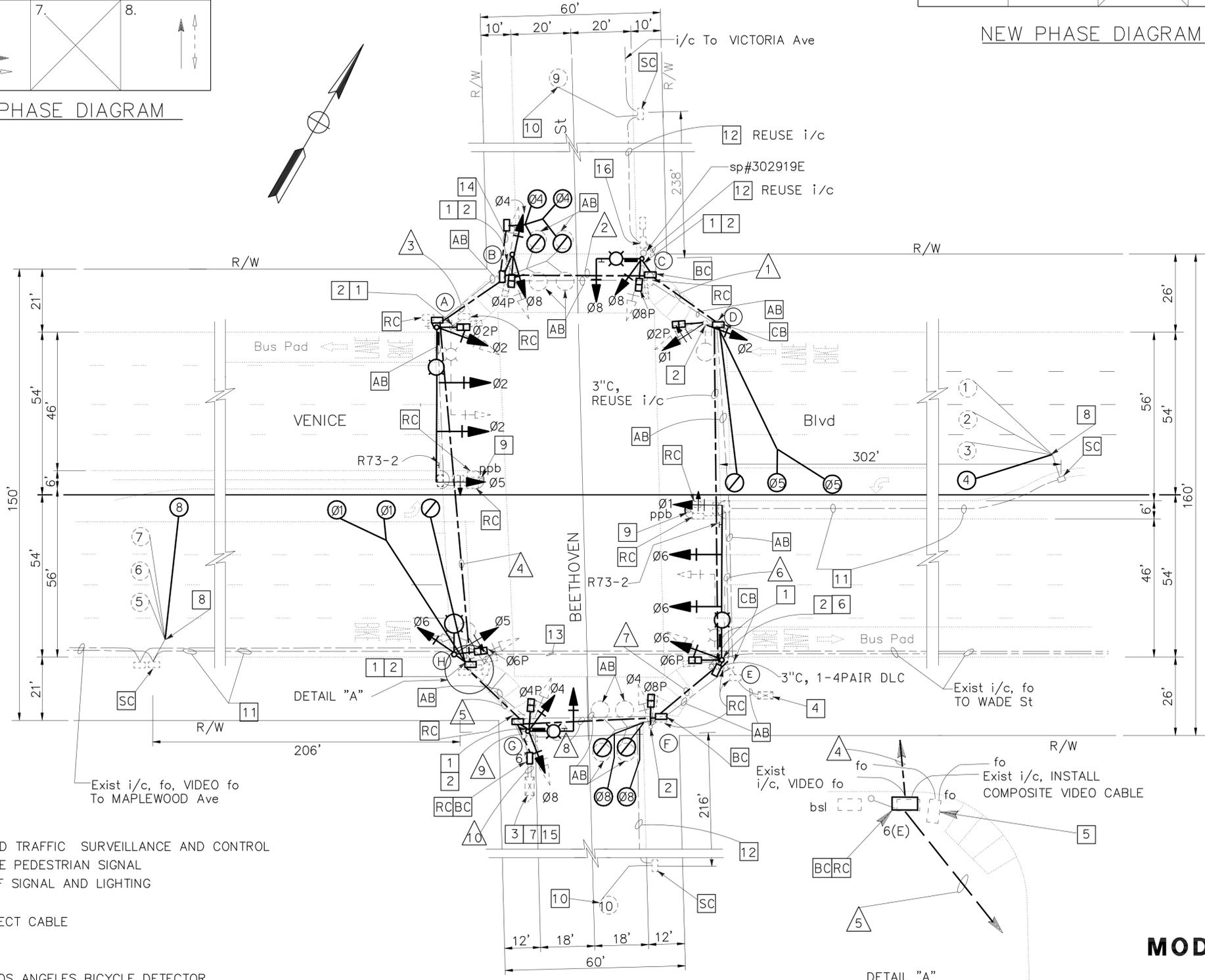
MAR VISTA ATSAC SYSTEM
DIRECT WIRE (CABLE) INTERCONNECT



NEW PHASE DIAGRAM



EXISTING PHASE DIAGRAM



PROJECT NOTES: (THIS SHEET ONLY)

- 1 RC SIGNAL AND LIGHTING POLE.
- 2 RS AUDIBLE PEDESTRIAN SIGNAL. RC PED HEAD. INSTALL ACCESSIBLE PEDESTRIAN SIGNAL (APS) SEE SHEET E-15.
- 3 EXISTING MODEL 2070 CONTROLLER IN MODEL 332 CONTROLLER CABINET. CONTACT LADOT AT (213) 485-6834 15 DAYS PRIOR TO START OF CONSTRUCTION FOR INSTALLATION OF TIMING CHANGES.
- 4 RS AUXILIARY VIDEO CABINET TO CITY OF LOS ANGELES. REROUTE CITY VIDEO FIBER OPTIC CABLE INTO EXISTING PULL BOX AT SW CORNER AND CONNECT TO VIDEO TRANSMITTER AND RECEIVER COMPONENT IN CONTROLLER CABINET.
- 5 ADJUST FO PULL BOX TO FINISH GRADE.
- 6 RS CAMERA TO CITY OF LOS ANGELES, INSTALL CCTV CAMERA ON THE NEW POLE.
- 7 INSTALL VIDEO TRANSMITTER AND RECEIVER IN CONTROLLER CABINET.
- 8 PROTECT EXISTING LOOPS, USE EXISTING STUB OUT.
- 9 RC PUSH BUTTON POST.
- 10 RENUMBER SYSTEM LOOPS AS SHOWN.
- 11 RC dlc, INSTALL 1-4 PAIR DLC, 1#8G
- 12 RC dlc, INSTALL 1-2 PAIR DLC, 1#8G
- 13 ADD COMPOSITE VIDEO CABLE IN INTERCONNECT CONDUIT FROM CAMERA TO CONTROLLER.
- 14 INSTALL 3"C, 1-2 PAIR DLC, 1#8G
- 15 INSTALL BBS EXTERNAL CABINET, BATTERIES AND STATE-FURNISHED BBS COMPONENTS.
- 16 DISCONNECT EXISTING 12 PAIR#19 INTERCONNECT CABLE FROM SIGNAL CONTROLLER, PULL IT BACK THROUGH EXISTING CONDUIT AND COIL IT UP IN PULL BOX. RECONNECT TO CONTROLLER ONCE NEW CONDUITS ARE INSTALLED.

MODIFY SIGNAL AND LIGHTING (CITY)
(LADOT INTERSECTION No.20750)
SCALE: 1" = 20'

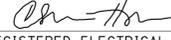
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN
FUNCTIONAL SUPERVISOR: HASSAN MANNA
CALCULATED/DESIGNED BY: YAGHOUB SHADROOZ
CHECKED BY: CESAR HERNANDEZ
REVISOR: YAGHOUB SHADROOZ
DATE: CESAR HERNANDEZ

ABBREVIATIONS
ATSAC - AUTOMATED TRAFFIC SURVEILLANCE AND CONTROL
APS - ACCESSIBLE PEDESTRIAN SIGNAL
BSL - BUREAU OF SIGNAL AND LIGHTING
CAL - CALTRANS
i/c - INTERCONNECT CABLE

LEGEND
 - CITY OF LOS ANGELES BICYCLE DETECTOR
 - CITY CAMERA

FOR GENERAL NOTES, POLE AND EQUIPMENT SCHEDULE, CONDUIT AND CONDUCTOR SCHEDULE SEE SHEET E-2.
THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	187	4.3	11	43

 1/11/11
 REGISTERED ELECTRICAL ENGINEER DATE
 3-7-11
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
CESAR HERNANDEZ
 No. 15805
 Exp. 12/31/12
 ELECTRICAL
 STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

POLE AND EQUIPMENT SCHEDULE

No.	STANDARD			VEH SIG MTG		PED SIGNAL	APS		LED	REFLECTORIZED SNS
	Type	SMA (F+)	LMA (F+)	Mast Arm	Pole	MTG	Ø	ARROW		
(A)	29A-5-100	55	12	1 MAT 2 MAS	SV-1-T	SP-1-T	4	←	235 W	BEETHOVEN St
(B)	1-B	—	—	—	TV-2-T	SP-1-T	2*	→	—	
(C)	17-3-100	15	6	1 MAS	SV-1-T	SP-1-T	2*	←	165 W	VENICE Blvd
(D)	CD953C (E)	—	—	—	SV-2-T	SP-1-T	8	→	235 W	
(E)	29A-5-100	55	12	1 MAT 2 MAS	SV-1-T	SP-1-T	8	←	235 W	BEETHOVEN St
(F)	1 (E)	—	—	—	TV-1-T (E)	SP-1-T	6*	→	—	
(G)	17-3-100	15	6	1 MAS	SV-2-T	SP-1-T	6*	←	165 W	VENICE Blvd
(H)	15TS	—	6	—	SV-2-T	SP-1-T	4	→	165 W	

* NON ACCTUATED PEDESTRIAN PHASE (RECALL)

GENERAL NOTES: (FOR SHEETS E-1 AND E-2 ONLY)

- INDUCTIVE LOOPS TO BE CENTERED IN LANES (UNLESS OTHERWISE NOTED) SEE SHEETS E-8 AND E-9. INSTALL DETECTOR LEAD-IN CABLE SEE SHEET E-10 AND E-11.
- INSTALL PULL BOXES SEE SHEET E-13. ALL PULL BOXES ARE PB-3 UNLESS OTHERWISE NOTED.
- NEW VEHICLE SIGNAL SECTIONS SHALL BE PLASTIC.
- ALL PEDESTRIAN HEADS MUST BE COUNTDOWN.
- INSTALL BICYCLE LOOP DETECTORS CASE II, AS SHOWN ON SHEET E-14.

PROPOSED CONDUIT AND CONDUCTOR SCHEDULE

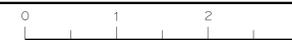
CONDUIT RUN		1	2	3	4	5	6	7	8	9	10
DLC	Ø1 2-PAIR					1				1	1
	Ø4 2-PAIR			1	1	1				1	1
	Ø5 2-PAIR	1	1	1	1	1				1	1
	Ø8 2-PAIR								1	1	1
	SYSTEM LOOPS		1	1	1	1			1	2	2
	4-PAIR					1	1	1	1	2	2
#6 SIGNAL SERVICE			2	2	2	2				2	2
#8 GROUND		1	1	1	1	1	1	1	1	1	1
28-CONDUCTOR CABLE		1	2	2	2	2		2	2	2	2
5CSC		2		2		2		2			
COMPOSITE VIDEO CABLE						1				1	1
FIBER OPTIC CABLE						1*				1*	1*
i/c		1(E)				2(E)		1(E)	1(E)	3(E)	3(E)
CONDUIT SIZE		3"	3"	3"	3"	3"	3" (E)	3"	3"	3"	2-3" (E)

* — REROUTE EXISTING FIBER OPTIC CABLE INTO CONTROLLER

**MODIFY SIGNAL AND LIGHTING
(CITY)
(LADOT INTERSECTION #20750)**

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans **TRAFFIC DESIGN**
 FUNCTIONAL SUPERVISOR: HASSAN MANNA
 CALCULATED/DESIGNED BY: YAGHOUB SHADROOZ
 CHECKED BY: CESAR HERNANDEZ
 REVISED BY: YAGHOUB SHADROOZ
 DATE REVISED: CESAR HERNANDEZ



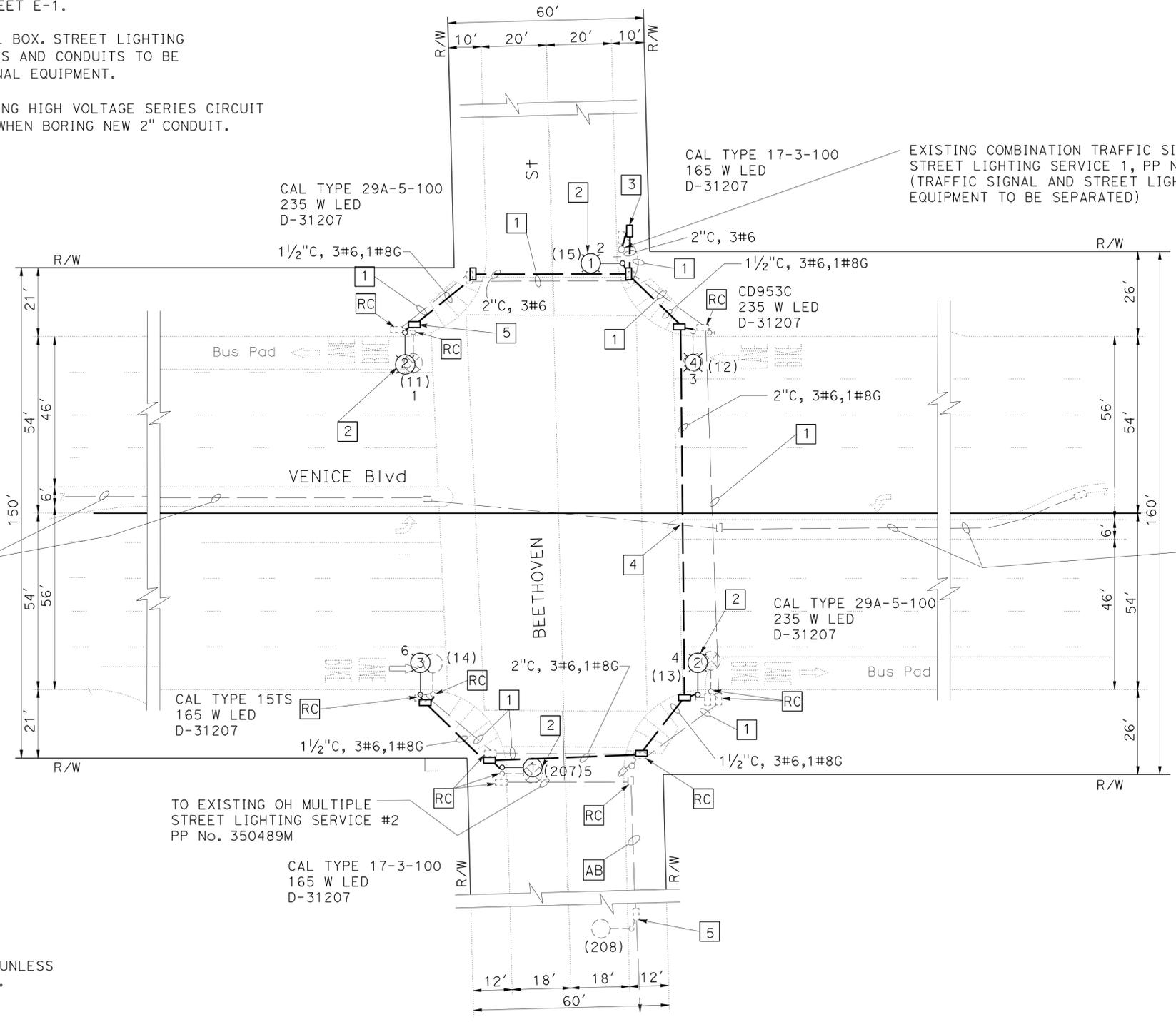
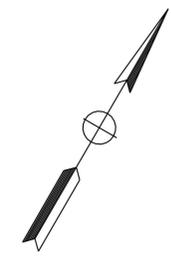
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	187	4.3	12	43
			1/11/11	DATE	
REGISTERED ELECTRICAL ENGINEER			No. 15805		
3-7-11			Exp. 12/31/12		
PLANS APPROVAL DATE			ELECTRICAL		
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					

FOR ACCURATE RIGHT OF WAY DATA, SEE RIGHT OF WAY ENGINEERING AT DISTRICT OFFICE.

PROJECT NOTES: (THIS SHEET ONLY)

- 1 TRAFFIC SIGNAL AND STREET LIGHT WIRING IN SHARED CONDUIT, DISCONNECT AND ABANDON IN PLACE THE STREET LIGHTING WIRES. SEE TRAFFIC SIGNAL PLAN FOR OTHER WORK.
- 2 FOR REFERENCE ONLY. FOR MORE INFORMATION AND EXACT LOCATION REFER TO SHEET E-1.
- 3 INSTALL TYPE 3 SERVICE PULL BOX. STREET LIGHTING SERVICE PULL BOX, CONDUCTORS AND CONDUITS TO BE SEPARATED FROM TRAFFIC SIGNAL EQUIPMENT.
- 4 NEW CONDUIT TO CROSS EXISTING HIGH VOLTAGE SERIES CIRCUIT AND WIRE. EXERCISE CAUTION WHEN BORING NEW 2" CONDUIT.
- 5 TAPE END OF SPARE WIRE.

WARNING
 BEFORE STARTING WORK ON EXISTING SERIES LIGHTING CIRCUITS, THE CONTRACTOR SHALL OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM SERVING COMPANIES, DISCONNECT CIRCUITS, AND PLACE "MEN AT WORK" SIGNS NEAR OPEN SWITCHES.



EXISTING SERIES HIGH VOLTAGE STREET LIGHTING CIRCUIT IN MEDIAN OF VENICE Blvd

EXISTING SERIES HIGH VOLTAGE STREET LIGHTING CIRCUIT IN MEDIAN OF VENICE Blvd.

GENERAL NOTE: (THIS SHEET ONLY)

1. ALL PULL BOXES SHALL BE TYPE 2 UNLESS OTHERWISE NOTED. SEE SHEET E-13.

MODIFY SIGNAL AND LIGHTING (CITY)

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

SCALE 1" = 20'

E-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans **TRAFFIC DESIGN**
 FUNCTIONAL SUPERVISOR: HASSAN MANNA
 CALCULATED/DESIGNED BY: YAGHOUB SHADROOZ
 CHECKED BY: CESAR HERNANDEZ
 REVISED BY: [] DATE: []
 REVISIONS: []

WIRING DIAGRAM LEGEND: (THIS SHEET ONLY)

- EXISTING LAMP AND BALLAST
- LAMP AND BALLAST
- CONDUCTOR
- EXISTING CONDUCTOR
- NEW CONDUCTOR
- TAPE END OF SPLICE WIRE
- NEW LUMINAIRE

MATERIAL LIST (FOR E-3 ONLY)

THE FOLLOWING IS A SUMMARY OF NEW ELECTROLIERS, LUMINAIRES, LAMPS, FOUNDATIONS, AND OTHER EQUIPMENT WHICH SHALL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR. THIS IS NOT INTENDED TO BE A COMPLETE LIST OF ALL MATERIALS REQUIRED.

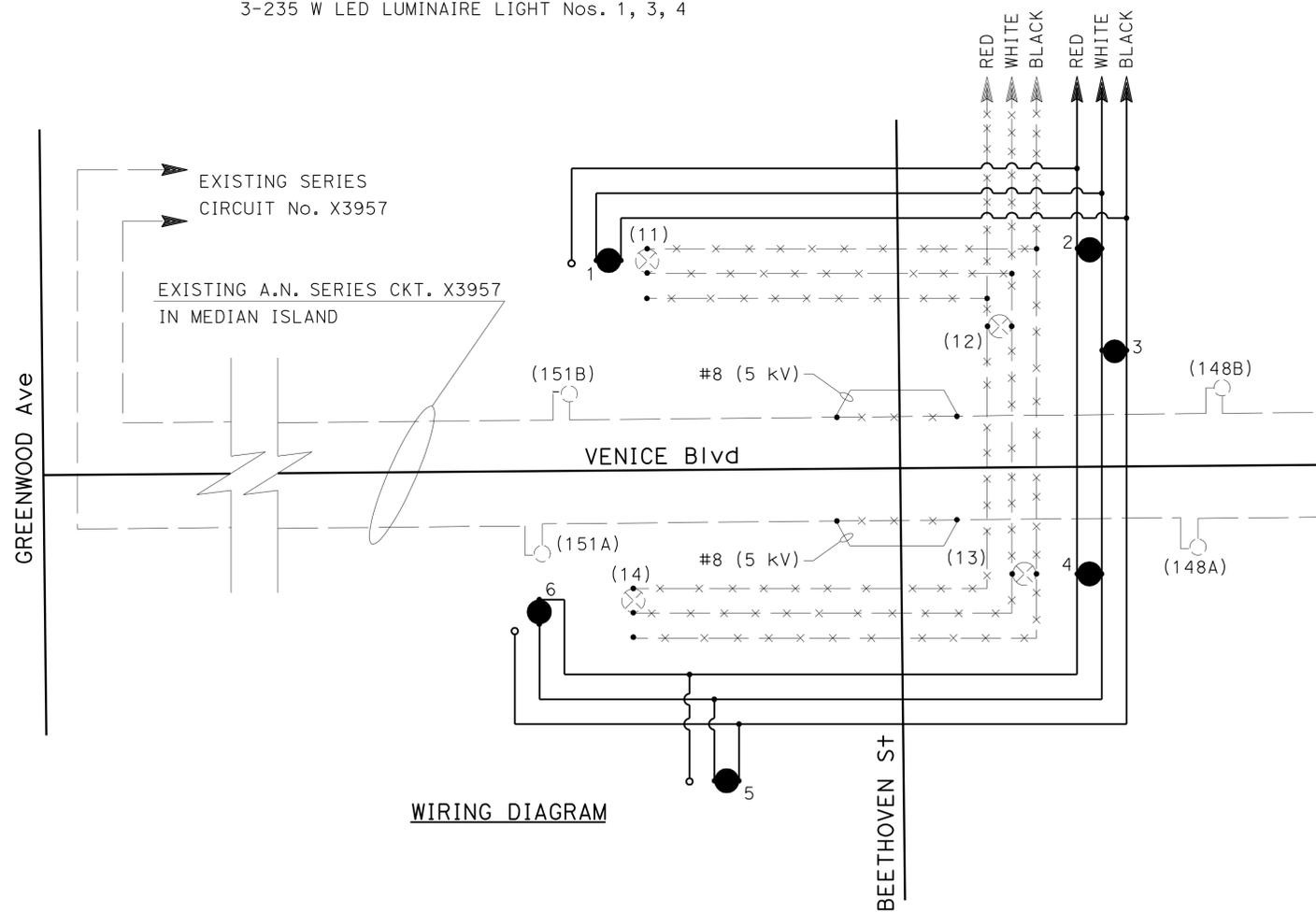
SYMBOL	ITEM	QTY	DESCRIPTION
①	ELECTROLIER	2	TYPE 17-3-100, 6' LUMINAIRE ARM WITH A TYPE 2 PULL BOX
②	ELECTROLIER	2	TYPE 29A-5-100, 12' LUMINAIRE ARM WITH A TYPE 2 PULL BOX
③	ELECTROLIER	1	TYPE 15TS, 6' LUMINAIRE ARM WITH TYPE 2 PULL BOX
③①	LUMINAIRE	3	3-165 W LED LIGHT
④②	LUMINAIRE	3	3-235 W LED LIGHT

EXISTING TRAFFIC SIGNAL/ST LTG MULTIPLE SERVICE #1

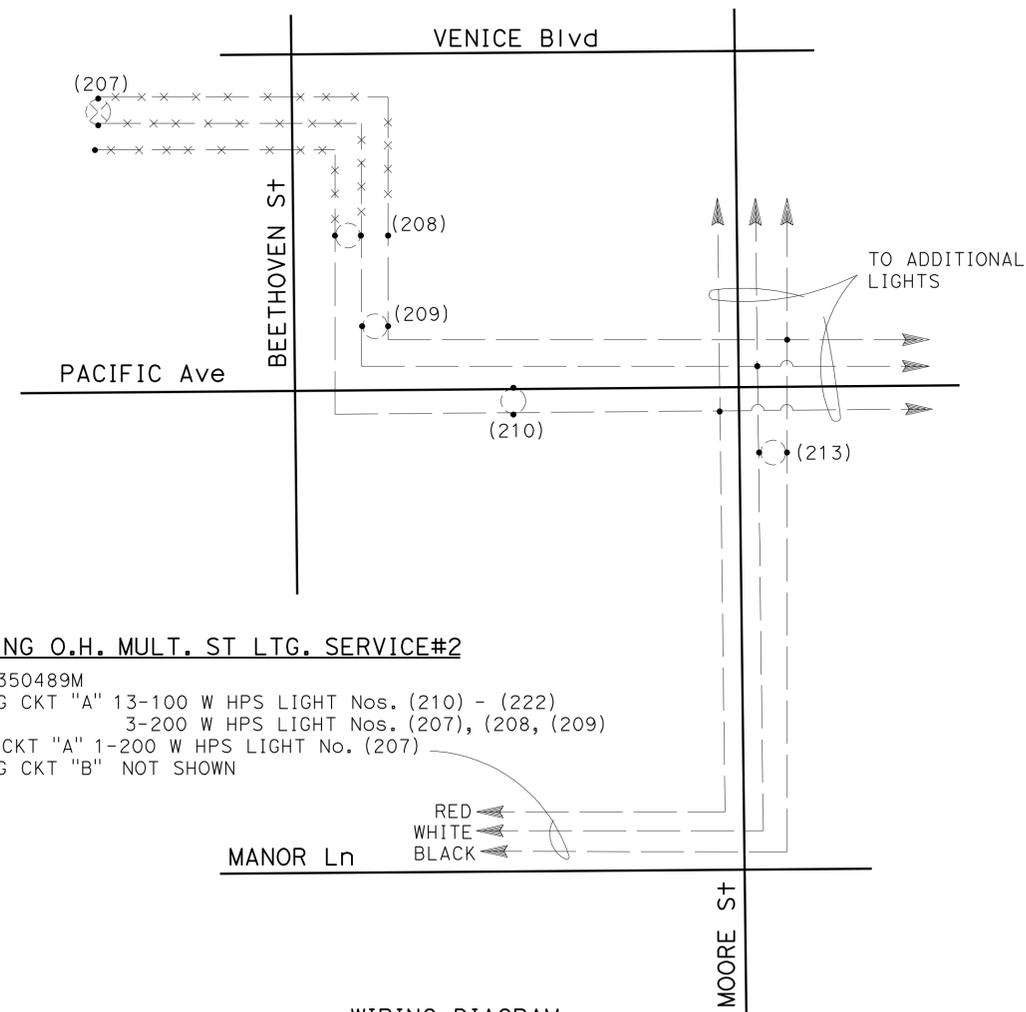
PP No. 302919E (TRAFFIC SIGNAL SERVICE TO REMAIN)
 EXISTING CKT "A" 310 W HPS LIGHT Nos. (11) - (14)
 REMOVE CKT "A" 4-310 W HPS LIGHT Nos. (11)-(14)

NEW STREET LIGHTING MULTIPLE SERVICE #1

PP No. 302919E
 INSTALL CKT "A" 3-165 W LED LUMINAIRE LIGHT Nos. 2, 5, 6
 3-235 W LED LUMINAIRE LIGHT Nos. 1, 3, 4



WIRING DIAGRAM



EXISTING O.H. MULT. ST LTG. SERVICE#2

PP No. 350489M
 EXISTING CKT "A" 13-100 W HPS LIGHT Nos. (210) - (222)
 3-200 W HPS LIGHT Nos. (207), (208), (209)
 REMOVE CKT "A" 1-200 W HPS LIGHT No. (207)
 EXISTING CKT "B" NOT SHOWN

WIRING DIAGRAM

WARNING
 BEFORE STARTING WORK ON EXISTING SERIES LIGHTING CIRCUITS THE CONTRACTOR SHALL OBTAIN DAILY SAFETY CIRCUIT CLEARANCE FROM SERVING COMPANIES, DISCONNECT CIRCUITS, AND PLACE "MEN AT WORK" SIGNS NEAR OPEN SWITCHES.

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

MODIFY SIGNAL AND LIGHTING
 (CITY)
 NO SCALE

E-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
 Caltrans® TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR HASSAN MANNA
 CALCULATED/DESIGNED BY
 CHECKED BY
 Y. SHADROOZ
 CESAR HERNANDEZ
 REVISED BY
 DATE REVISED

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	187	4.3	14	43

	1/11/11
REGISTERED ELECTRICAL ENGINEER	DATE
	
3-7-11	
PLANS APPROVAL DATE	
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>	

STREET LIGHTING MULTIPLE CIRCUIT NOTES (FOR E-3 TO E-4 ONLY)

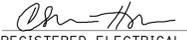
1. WARNING: SAFETY CLEARANCE SHALL BE OBTAINED DAILY FROM THE AFFECTED UTILITY COMPANY BY TELEPHONING (213) 367-9908 BEFORE DOING ANY WORK IN CLOSED PROXIMITY TO ANY OVERHEAD ELECTRIC LINE.
2. MULTIPLE CIRCUIT WIRE SHALL BE No. 6 AWG STRANDED COPPER CONDUCTOR, TYPE THWN/THHN INSULATION, UL APPROVED FOR 600 VOLT OPERATION UNLESS OTHERWISE SPECIFIED HEREON.
3. THREE WIRES (COLOR CODE: 1-RED, 1-BLACK, 1-WHITE) SHALL BE INSTALLED IN ALL MULTIPLE CIRCUIT CONDUIT UNLESS OTHERWISE SPECIFIED HEREON.
4. EVEN NUMBERED ELECTROLIERS SHALL BE CONNECTED TO RED AND WHITE WIRES AND ODD NUMBERED ELECTROLIERS SHALL BE CONNECTED TO BLACK AND WHITE WIRES.
5. ELECTROLIERS SHALL BE WIRED PER TYPICAL MULTIPLE CIRCUIT ELECTROLIER WIRING DETAIL, SHEET E-6, UNLESS SPECIFIED OTHERWISE.
6. MULTIPLE CIRCUITS IN CONDUITS CONTAINING MORE THAN THREE CONDUCTORS SHALL BE APPROPRIATELY IDENTIFIED BY LABELING CONDUCTORS "A", "B", ETC, WITH APPROVED SELF-LAMINATING LETTER TAPE WRAPPED AT LEAST TWICE AROUND THE CONDUCTOR IN EACH PULL BOX. (SPECIAL SELF-LAMINATING WIRE MARKERS OR EQUIVALENT).

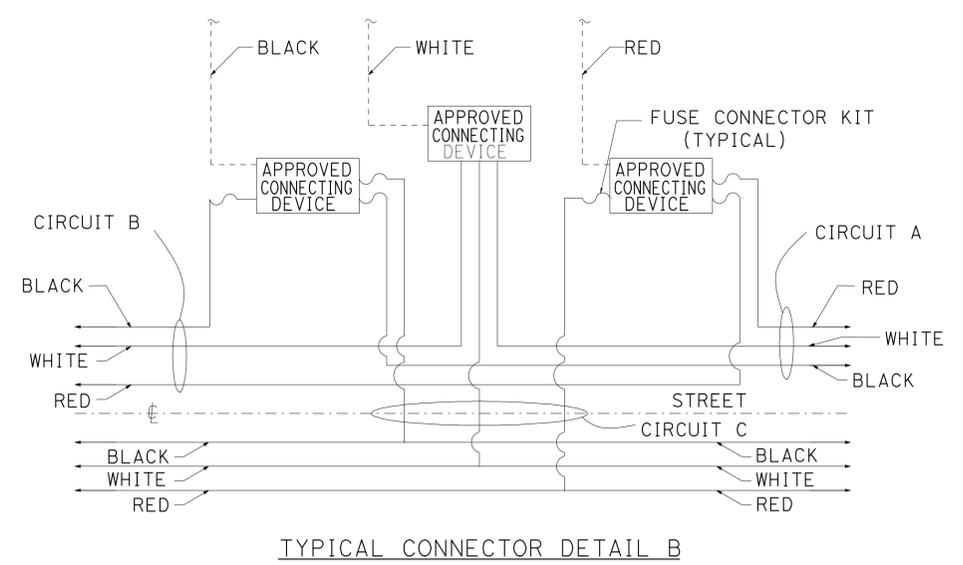
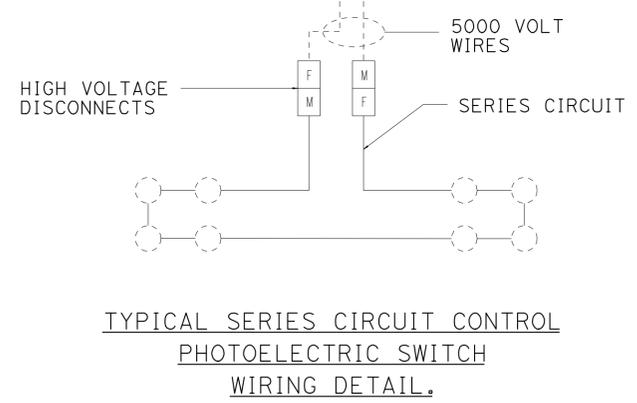
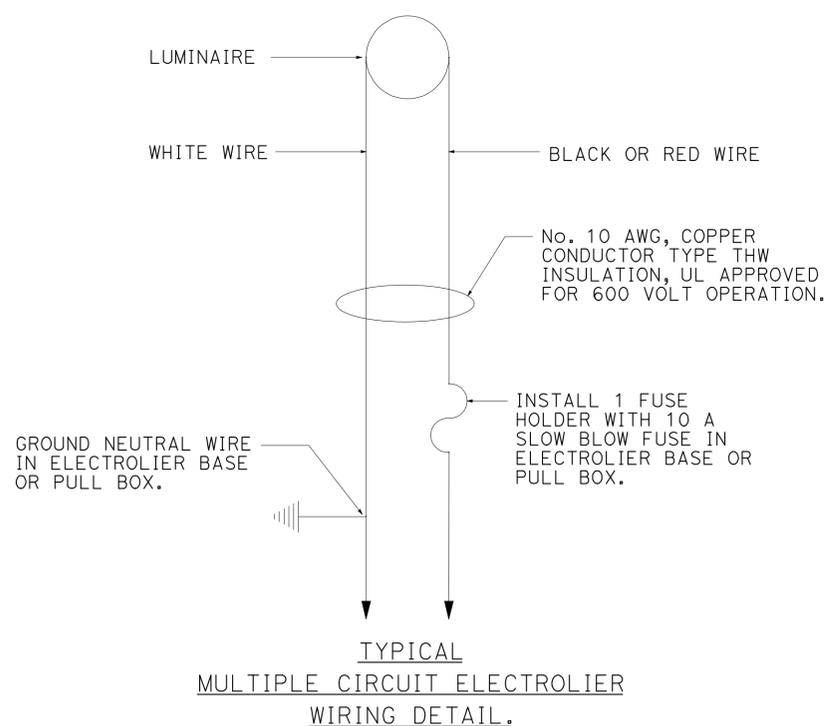
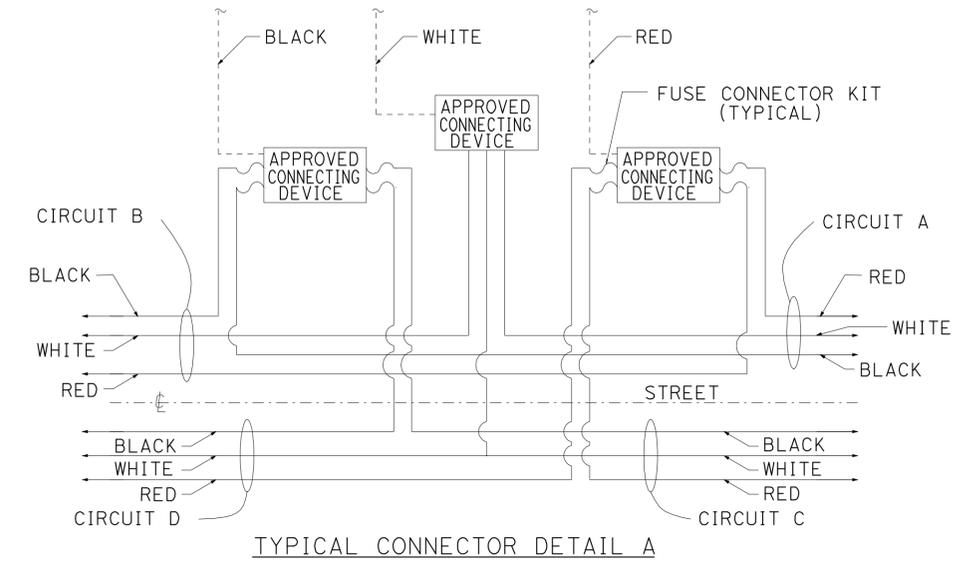
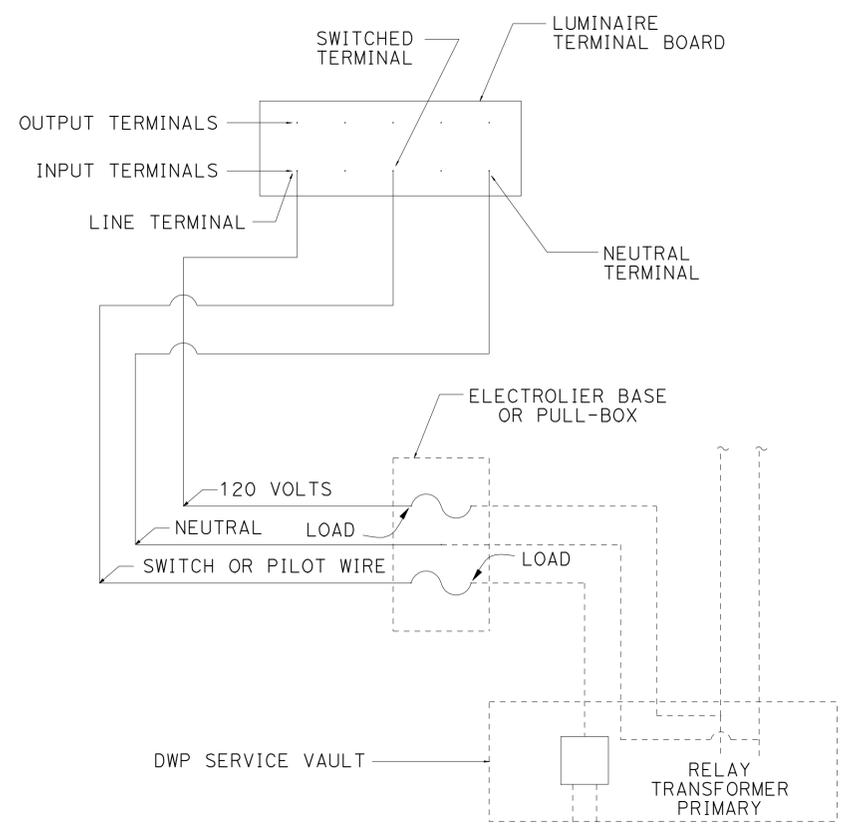
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans **TRAFFIC DESIGN**
 FUNCTIONAL SUPERVISOR
 HASSAN MANNA
 CALCULATED, DESIGNED BY
 CHECKED BY
 YAGHOUB SHADROOZ
 CESAR HERNANDEZ
 REVISED BY
 DATE REVISED

**MODIFY SIGNAL AND LIGHTING
(CITY)**

E-5

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	187	4.3	15	43
			1/11/11	DATE	
REGISTERED ELECTRICAL ENGINEER			DATE		
3-7-11			PLANS APPROVAL DATE		
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					



— INDICATES WIRES INSTALLED BY STREET LIGHTING CONTRACTOR
 - - - - - INDICATES WIRES INSTALLED BY SERVING COMPANY

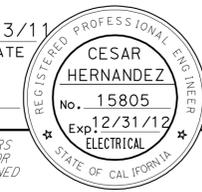
**MODIFY SIGNAL AND LIGHTING
 (CITY)
 (ELECTRICAL DETAILS)
 NO SCALE**

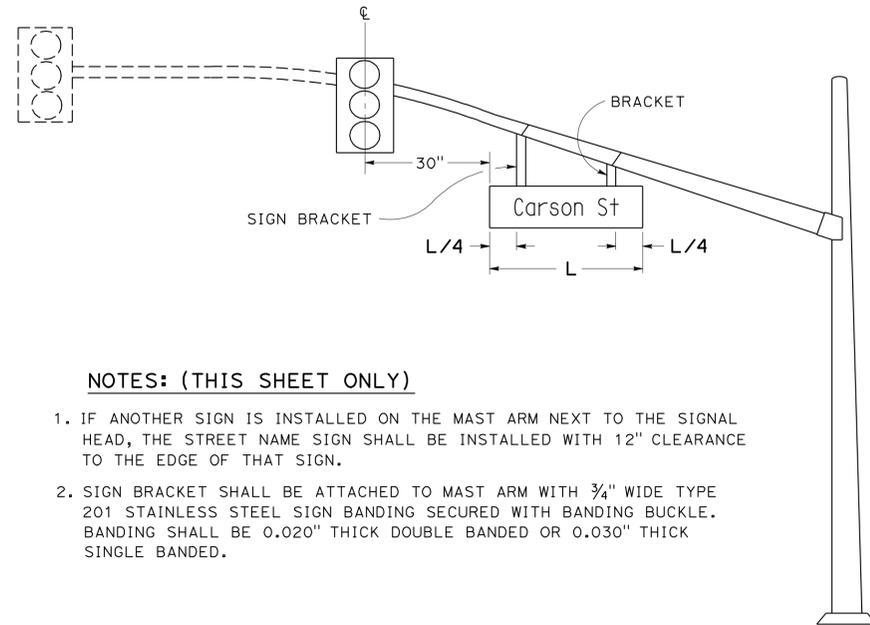
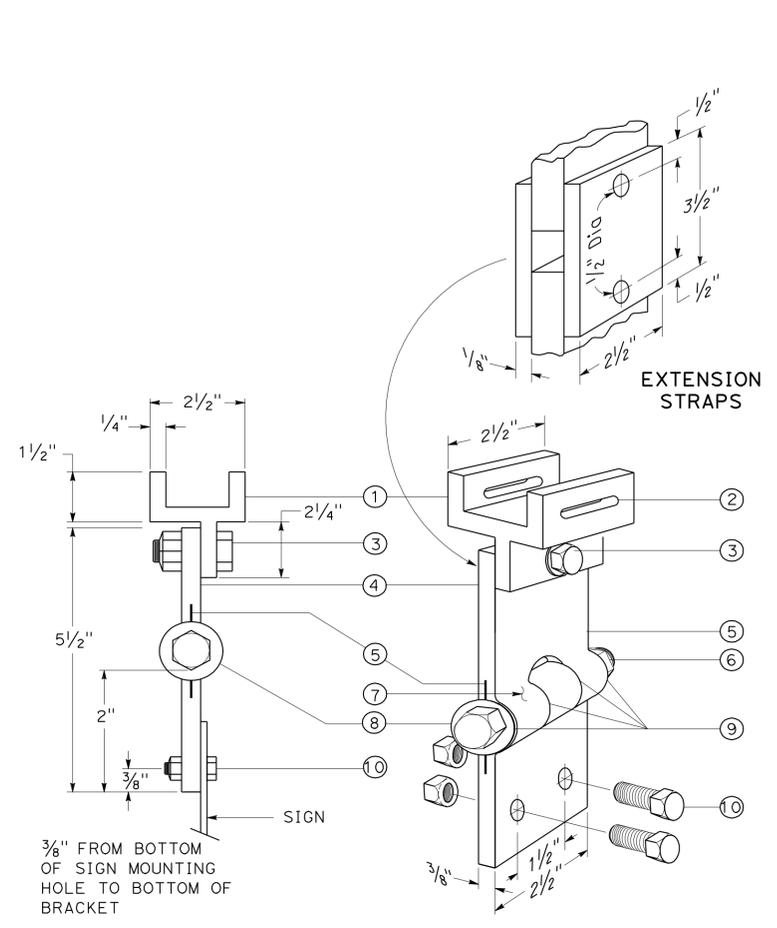
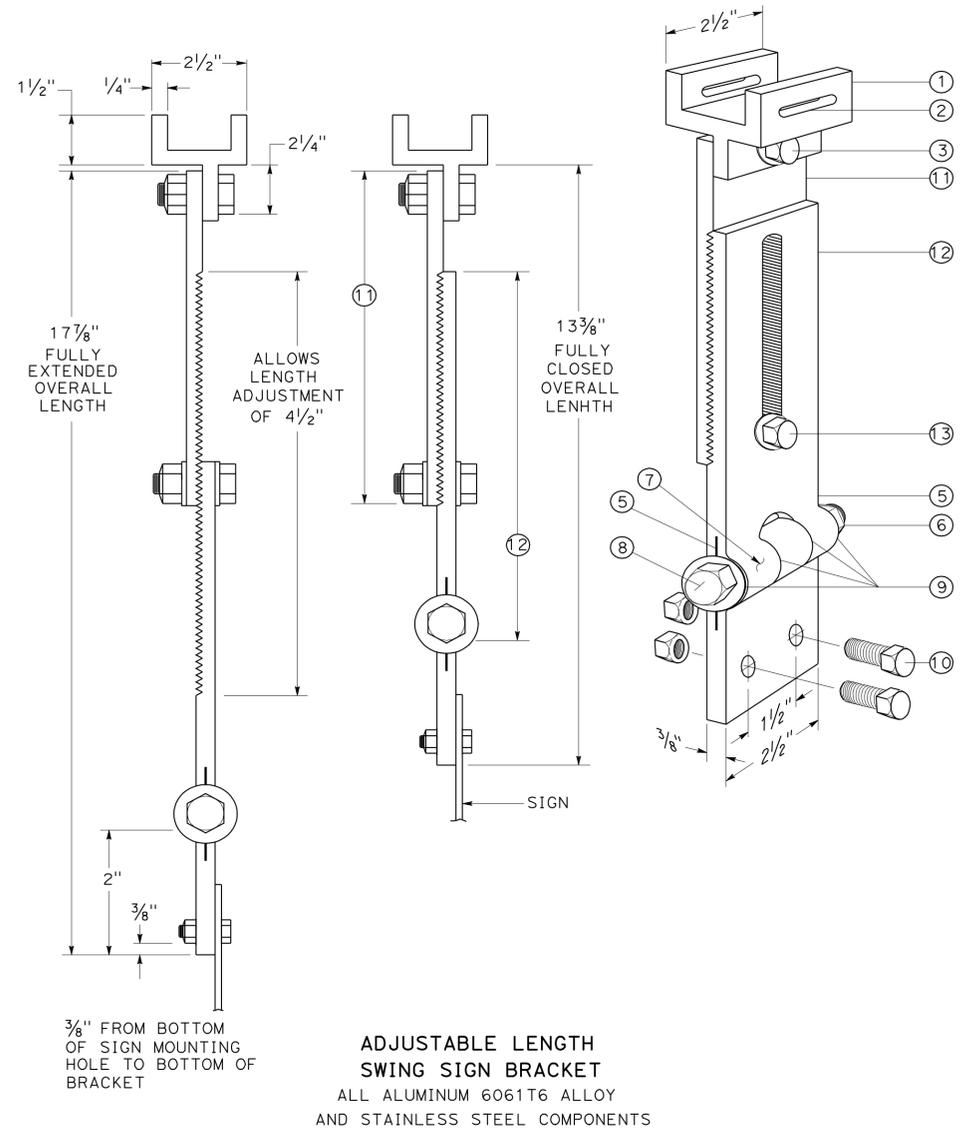
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR: HASSAN MANAA
 YAGHOUB SHADROOZ
 CESAR HERNANDEZ
 REVISIONS: [Table with columns for REVISION NO., DATE, BY, REASON]

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.



LAST REVISION | DATE PLOTTED => 09-MAR-2011
 00-00-00 | TIME PLOTTED => 09:33

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	187	4.3	16	43
 REGISTERED ELECTRICAL ENGINEER DATE 1/13/11					
3-7-11 PLANS APPROVAL DATE					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					



- NOTES: (THIS SHEET ONLY)**
- IF ANOTHER SIGN IS INSTALLED ON THE MAST ARM NEXT TO THE SIGNAL HEAD, THE STREET NAME SIGN SHALL BE INSTALLED WITH 12" CLEARANCE TO THE EDGE OF THAT SIGN.
 - SIGN BRACKET SHALL BE ATTACHED TO MAST ARM WITH 3/4" WIDE TYPE 201 STAINLESS STEEL SIGN BANDING SECURED WITH BANDING BUCKLE. BANDING SHALL BE 0.020" THICK DOUBLE BANDED OR 0.030" THICK SINGLE BANDED.

- NOTES: (THIS SHEET ONLY)**
- PIVOTAL UPPER BRACKET.
 - 1" x 1/4" SLOT FOR DOUBLE STRAPPING TO ELECTROLIER MAST ARM. 0.032" x 1/4" HEAVY DUTY STAINLESS STRAP WITH BUCKLE RECOMMENDED.
 - 1/2-13UNC x 1/2" STAINLESS STEEL HEX HEAD BOLT WITH STAINLESS STEEL HEX LOCK NUT AND 1/16" STAINLESS STEEL WASHER (BOTH SIDES). ALLOWS UPPER BRACKET TO PIVOT AND ALIGN WITH ELECTROLIER MAST ARM. DO NOT TIGHTEN PAST NUT LOCKING FEATURE FOR PIVOT ACTION TO BE OPERATIONAL.
 - 5 1/2" OVERALL LENGTH FIXED LENGTH SIGN BRACKET.
 - STAINLESS STEEL DAMPENER SPRING (REMOVABLE).
 - STAINLESS STEEL HEX LOCK NUT WITH 1/16" STAINLESS STEEL WASHER. DO NOT TIGHTEN IT BINDS HINGES.
 - 1" OD AXLE HOUSING.
 - 1/2-13UNC x 4" STAINLESS STEEL HEX HEAD BOLT WITH 1/16" STAINLESS STEEL WASHER. DO NOT TIGHTEN LOCK NUT PAST LOCKING FEATURE IF BINDS HINGES.
 - OILITE BUSHING.
 - SIGN MOUNTING SETS, CONSISTING OF TWO EACH 5/16-18UNC x 1" STAINLESS STEEL HEX HEAD BOLT WITH STAINLESS STEEL HEX LOCK NUT. TWO HOLES. ON 1/2" CENTERS PROVIDE POSITIVE LOCK SIGN MOUNTING TO BRACKET.
 - 7 3/4" OVERALL LENGTH UPPER ADJUSTABLE SIGN BRACKET SECTION.
 - 9" OVERALL LENGTH LOWER ADJUSTABLE SIGN BRACKET SECTION, INCLUDING AXLE HOUSING (8" OVERALL LENGTH TO TOP OF AXLE HOUSING).
 - 1/2-13 UNC x 1/2" STAINLESS STEEL HEX BOLT WITH STAINLESS STEEL HEX LOCK NUT AND 1/16" STAINLESS STEEL WASHERS (BOTH SIDES). LOOSEN LOCK NUT, ADJUST BRACKET TEETH TO LEVEL SIGN.

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

**SIGNAL AND LIGHTING
(CITY)
(ELECTRICAL DETAILS)
NO SCALE
E-7**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR HASSAN MANNA
 CALCULATED/DESIGNED BY CHECKED BY
 YAGHOUB SHADROOZ CESAR HERNANDEZ
 REVISED BY DATE REVISED

USERNAME => frmikes1
 DGN FILE => 74f280ua07.dgn

RELATIVE BORDER SCALE
 IS IN INCHES

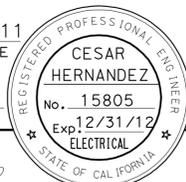


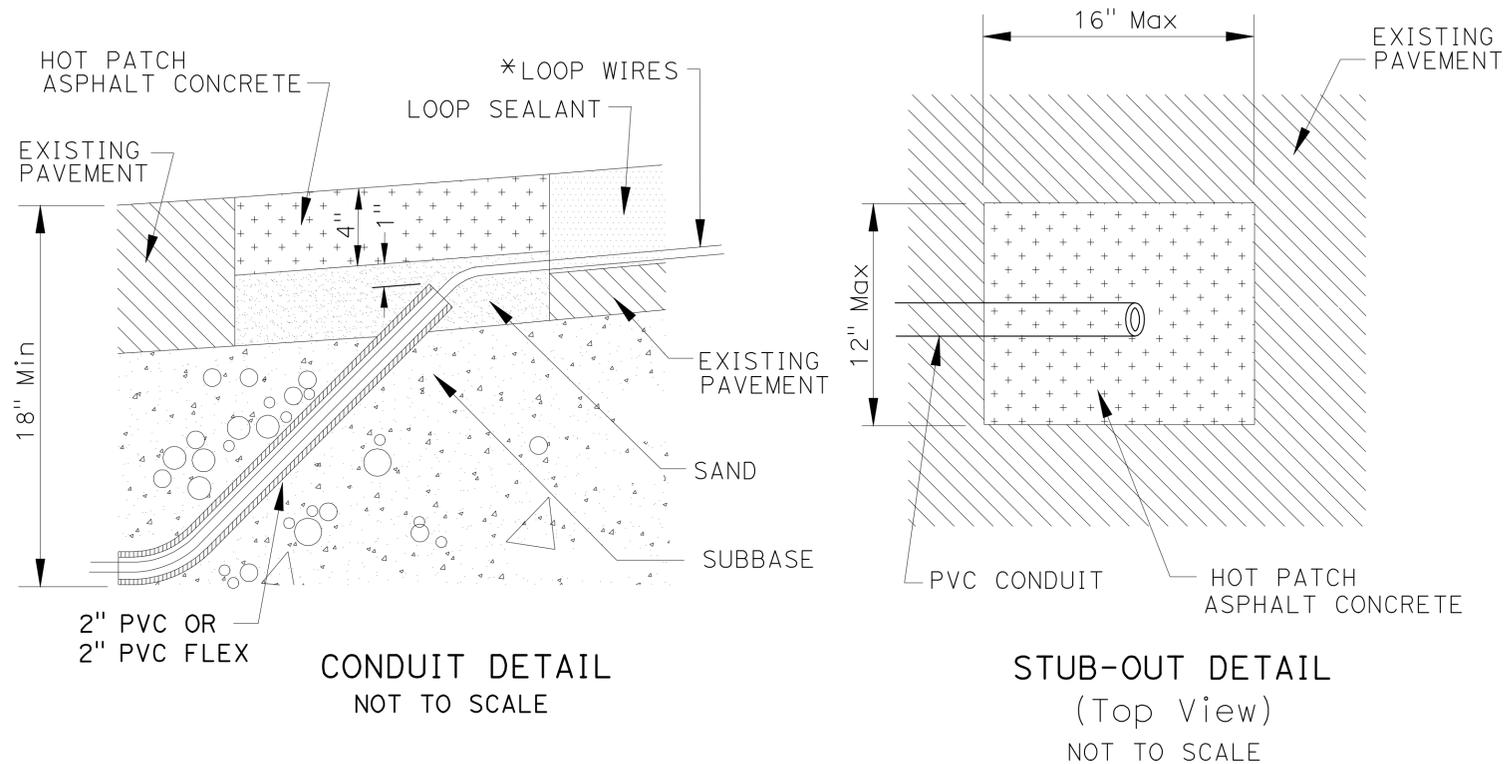
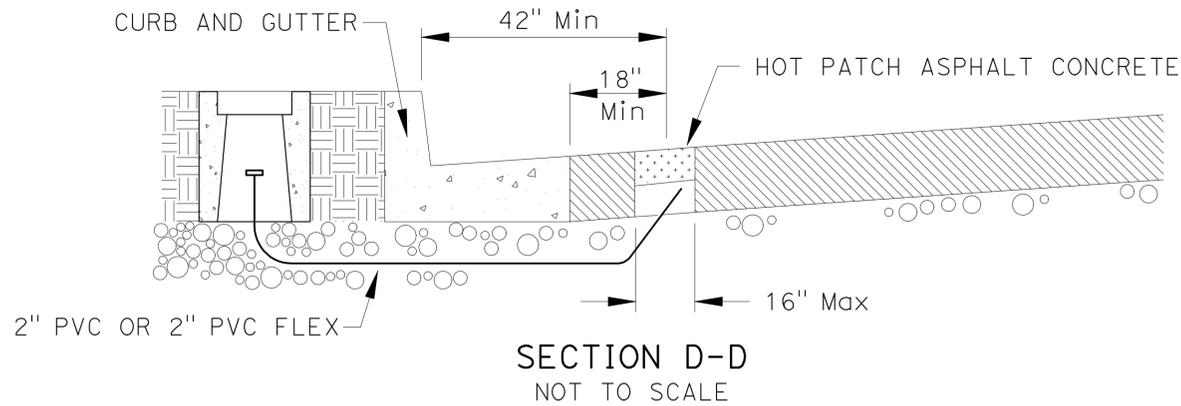
UNIT 1879

PROJECT NUMBER & PHASE

07000018691

LAST REVISION DATE PLOTTED => 09-MAR-2011
 00-00-00 TIME PLOTTED => 09:33

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	187	4.3	18	43
			1/11/11	DATE	
REGISTERED ELECTRICAL ENGINEER					
3-7-11			PLANS APPROVAL DATE		
					
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					



NOTES:

Perform Loop Installation in the Following Order:

1. OPEN THE PAVEMENT AT LEAST 42" FROM CURB FACE AND AT LEAST 18" FROM EDGE OF GUTTER USING A STAR DRILL OR A JACK HAMMER (ASPHALT CONCRETE ONLY). OPEN NO MORE THAN A 12" X16" AREA. IN CASES WHERE THERE IS A CONCRETE BUS PAD ADJACENT TO THE GUTTER, INSTALL THE STUBOUT BEYOND THE EDGE OF THE BUS PAD.
 2. INSTALL 2" PVC (SCHEDULE 80) OR PVC FLEX (SCHEDULE 40) FROM THE PULL BOX PIT WITH A 45° ELBOW AT THE STUB-OUT AS SHOWN. DEPTH OF THE CONDUIT SHALL BE AT LEAST 18" BELOW THE STREET GRADE.
 3. PATCH STREET USING HOT PATCH ASPHALT CONCRETE AND SAND AS SHOWN.
 4. INSTALL DUCT SEAL WHERE WIRES ENTER 2" PVC OR 2" PVC FLEX.
 5. FILL SAWCUT SLOT WITH HOT-MELT RUBBERIZED ASPHALT SEALANT.
- * NO MORE THAN 8 LOOPS OR 16 WIRES PER STUB-OUT.

**MODIFY SIGNAL AND LIGHTING
(CITY)
(ELECTRICAL DETAILS)
NO SCALE**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR: HASSAN MANNA
 CALCULATED/DESIGNED BY: YAGHOUB SHADROOZ
 CHECKED BY: CESAR HERNANDEZ
 REVISIONS: (None)
 REVISOR: (None)
 DATE: (None)
 REVISIONS: (None)
 REVISOR: (None)
 DATE: (None)

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	187	4.3	19	43

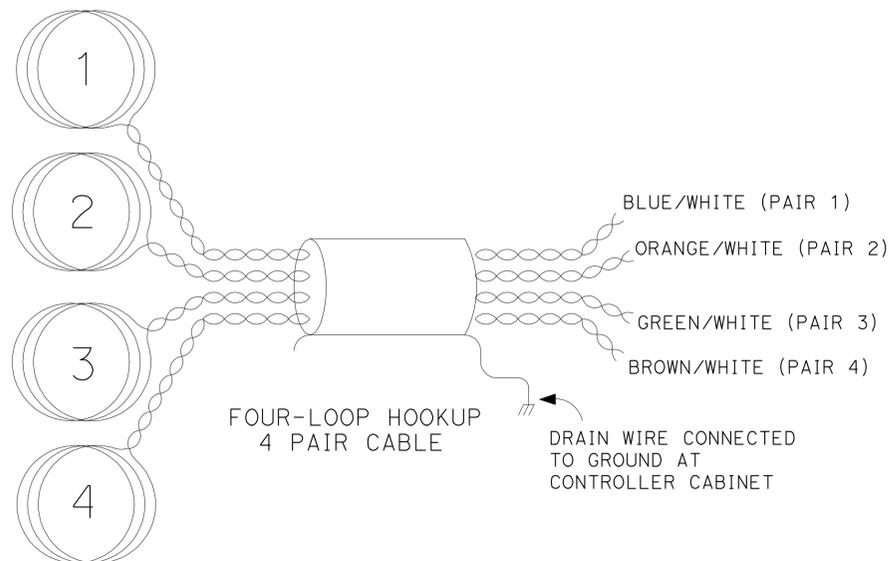
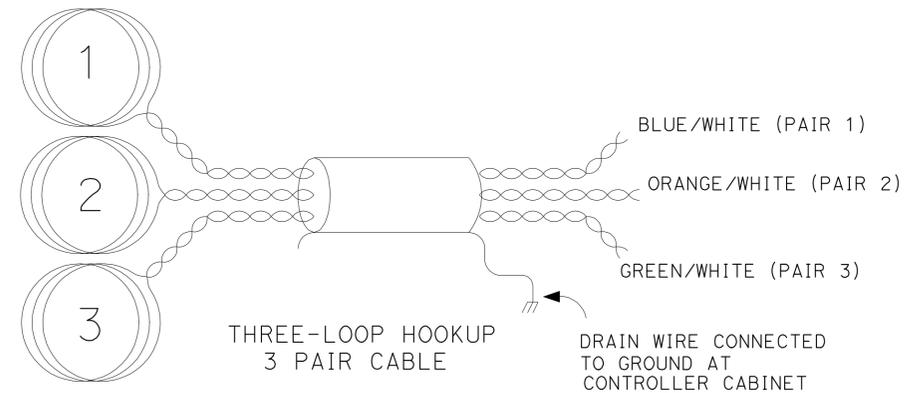
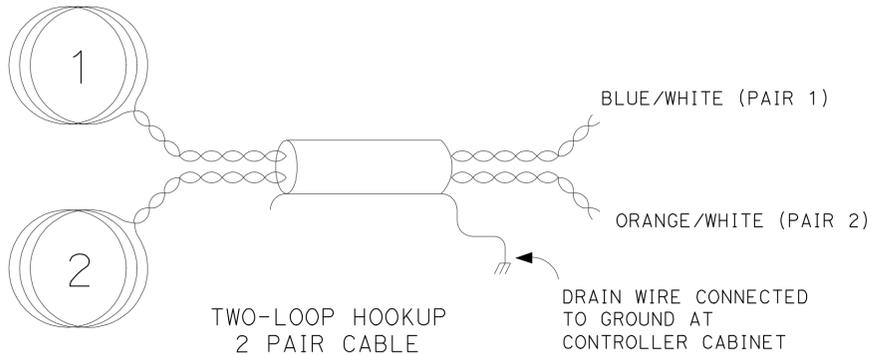
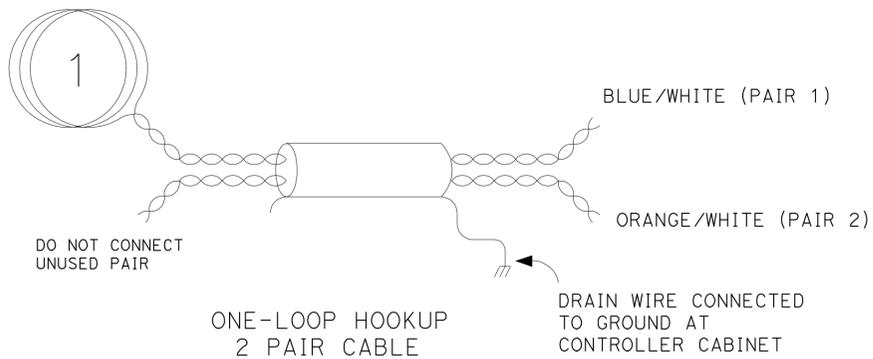
<i>Cesar Hernandez</i>	1/11/11
REGISTERED ELECTRICAL ENGINEER	DATE
3-7-11	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
CESAR HERNANDEZ
No. 15805
Exp. 12/31/12
ELECTRICAL
STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. THIS SHEET DESCRIBES A TWO, THREE OR FOUR PAIR LOOP DETECTOR LEAD-IN CABLE, INDIVIDUALLY SHIELDED AND JACKETED AND SUITABLE FOR INSTALLATION IN A PAVEMENT SAWCUT, CONDUIT, OR DIRECT BURIAL.
2. THE DETECTOR LEAD-IN CABLE CAN BE WIRED IN EITHER A SINGLE, DOUBLE, TRIPLE OR QUADRUPLE CHANNEL CONFIGURATION.
3. ELECTRICAL CONNECTIONS SHALL BE CAREFULLY SOLDERED AND WATERPROOFED.
4. LOOP NUMBERS SHOWN ARE TYPICAL.
5. SYSTEM LOOPS USE A SINGLE PAIR FOR EACH LOOP.



THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.



**MODIFY SIGNAL AND LIGHTING
(CITY)
(ELECTRICAL DETAILS)**

NO SCALE

E-10

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	YAGHOUB SHADROOZ	REVISOR	DATE
Caltrans TRAFFIC DESIGN	CESAR HERNANDEZ	BY	
FUNCTIONAL SUPERVISOR	HASSAN MANNA	CHECKED BY	
CALCULATED/DESIGNED BY			

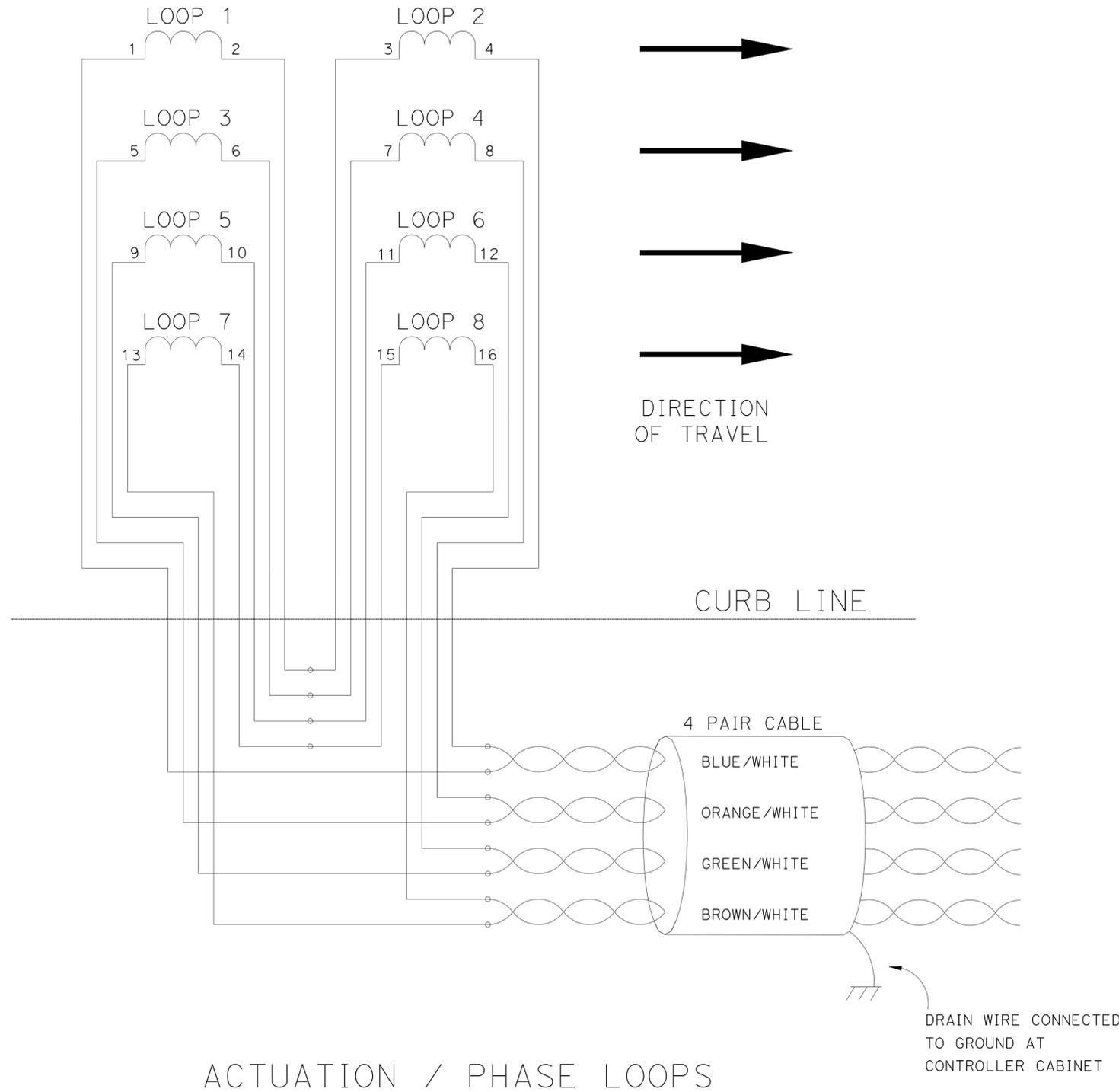
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	187	4.3	20	43

<i>Cesar Hernandez</i>	1/11/11
REGISTERED ELECTRICAL ENGINEER	DATE
CESAR HERNANDEZ	No. 15805
3-7-11	Exp! 2/31/12
PLANS APPROVAL DATE	ELECTRICAL

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. CONNECT TWO TO FOUR LOOPS IN SERIES TO EACH PAIR, DO NOT USE PARALLEL CONNECTIONS.
2. DO NOT CONNECT ANY UNUSED CABLE PAIRS.
3. TYPICAL INSTALLATION SHOWN. TWO OR THREE PAIR CABLE MAY BE USED WHEN SHOWN ON SIGNAL PLAN.



ACTUATION / PHASE LOOPS

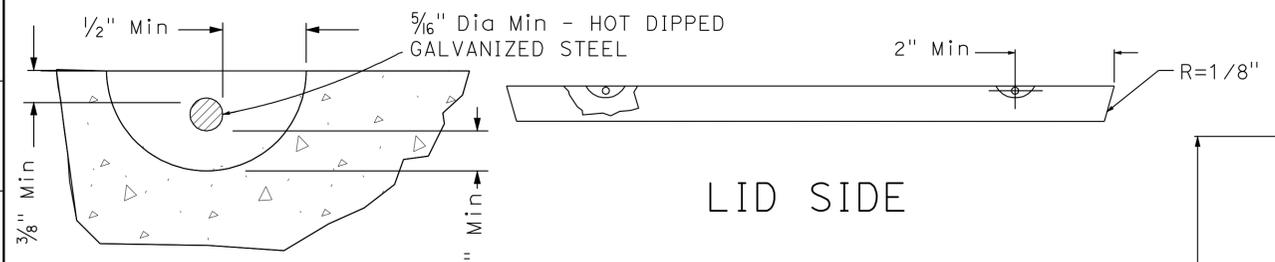
**MODIFY SIGNAL AND LIGHTING
(CITY)
(ELECTRICAL DETAILS)
NO SCALE**

E-11

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
FUNCTIONAL SUPERVISOR HASSAN MANNA
CALCULATED / DESIGNED BY CHECKED BY
YAGHOUB SHADROOZ CESAR HERNANDEZ
REVISED BY DATE

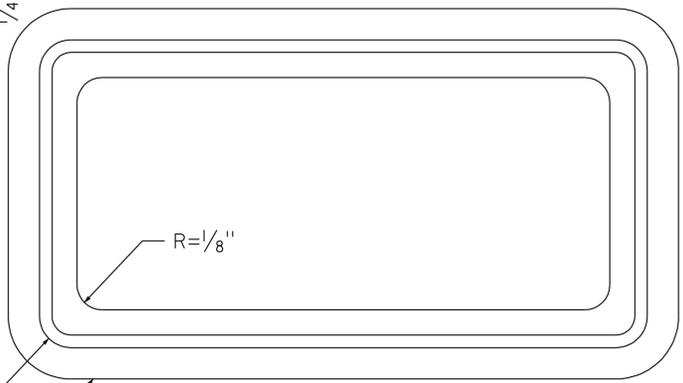
THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.



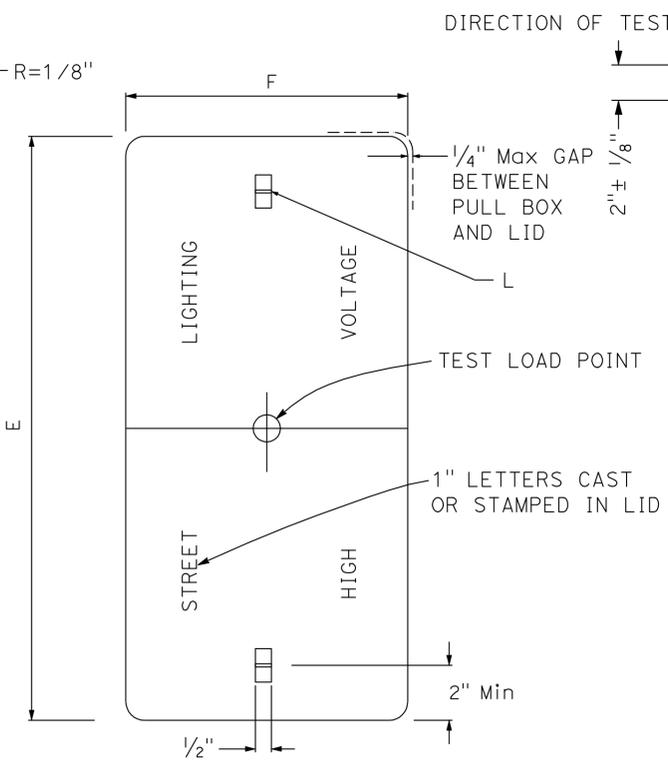


LID SIDE

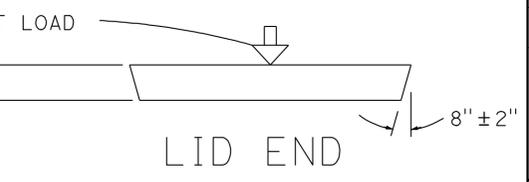
LIFT BAR DETAIL



BOX PLAN



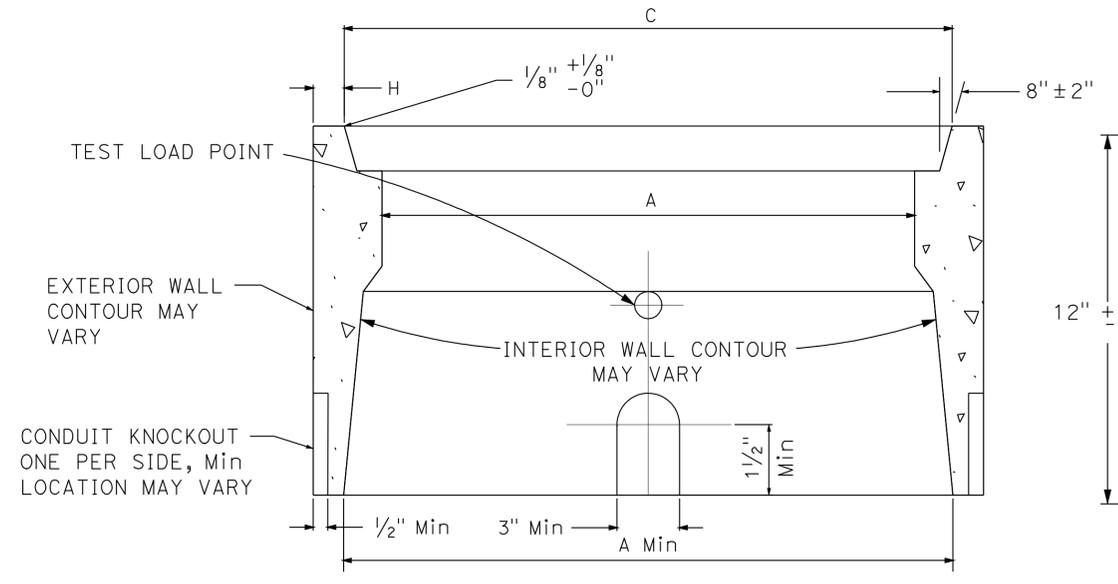
LID PLAN



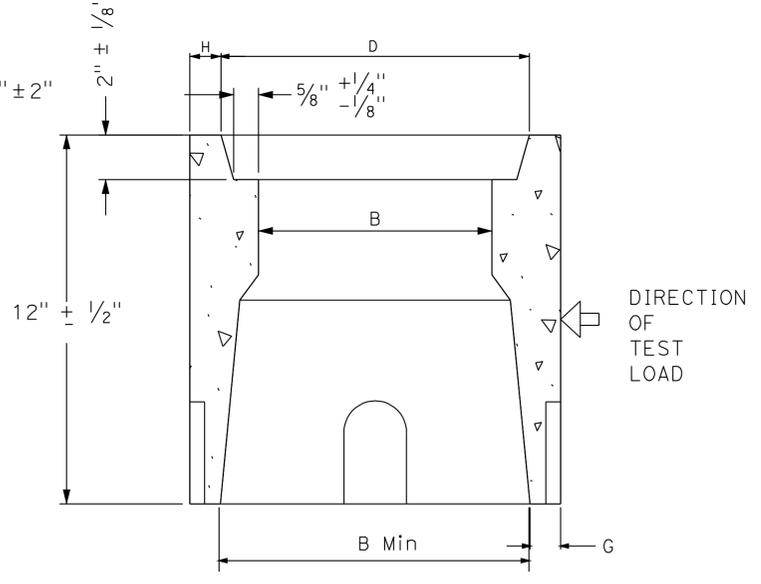
LID END

GENERAL NOTES

- WHERE "PULL BOX" IS SPECIFIED IN THE PLANS, IT SHALL CONSIST OF A PULL BOX AND LID, AND SHALL MEET THE REQUIREMENTS OF THIS PLAN.
- PULL BOXES SHALL BE CONCRETE. OTHER MATERIALS MAY BE USED UPON APPROVAL BY THE ENGINEER.
- ALL CONCRETE USED IN PULL BOX CONSTRUCTION SHALL HAVE 3000 psi MINIMUM COMPRESSIVE STRENGTH.
- ALL EDGES AND CORNERS SHALL HAVE SMOOTH AND UNIFORM RADII OF 1/4" OR LESS UNLESS OTHERWISE SPECIFIED HEREON.
- VOIDS, BLEMISHES, OR IMPERFECTIONS EXCEEDING 3/8" IN MAXIMUM DIMENSION SHALL NOT EXISTING IN ANY SURFACE.
- ALL SURFACES EXPOSED AFTER INSTALLATION SHALL BE SMOOTHLY FINISHED AND REGULAR. CHIPS AND VOID THEREIN ARE NOT PERMITTED.
- MOLD, JOINT, OR SEAM LINES WITHIN 1" OF THE OF THE BOX SHALL BE SMOOTHLY FINISHED.
- CONDUIT KNOCKOUTS SHALL BE REMOVABLE WITHOUT DAMAGE TO THE REMAINDER OF THE BOX.
- PULL BOXES AND LIDS SHALL BE STEEL REINFORCED.
- REINFORCING STEEL SHALL NOT BE EXPOSED.
- WHERE STEEL REINFORCING INTERSECTS, IT SHALL BE SECURELY WELDED.
- THE LIFT BAR IN THE PULL BOX LID SHALL BE SECURELY WELDED TO THE REINFORCING STEEL OR MADE EQUALLY SECURE IN THE LID BY SOME OTHER METHOD.
- LETTERS SHOWN ON LID SHALL BE DIFFERENT FROM OR OF A SIZE LESS THAN THAT INDICATED HEREON.
- LID SHALL SEAT EVENLY ON THE LID FLANGE AND SHALL NOT ROCK MORE THAN 1/8".
- LID BOLTS SHALL BE PROVIDED WHEN SPECIFIED. THEY SHALL CONSIST OF NOT LESS THAN TWO BOLTS, 5/16" Dia MINIMUM WHICH SHALL EACH EXTEND THROUGH PULL BOX AND LID. THEY SHALL SECURE THE LID WITH HEX HEADED NUTS AND WASHERS WHICH SHALL BE RECESSED BELOW THE TOP OF THE LID. BOLTS SHALL BE LOCATED SYMETRICALLY WITH RESPECT TO THE TOP SURFACE OF THE LID AND SHALL HAVE A NON-CORROSIVE SURFACE.
- PULL BOX LID AND PULL BOX SHALL NOT SHOW ANY EVIDENCE OF FAILURE WHEN SUBJECTED TO A 1000 lbs. VERTICAL LOAD APPLIED DOWNWARD AT THE CENTER OF THE LID WITH THE EDGES SUPPORTED BY THE PULL BOX. TEST LOAD SHALL BE APPLIED BY A SMOOTH SURFACE OF ONE SQUARE INCH CROSS SECTION.
- THE PULL BOX SHALL NOT SHOW ANY EVIDENCE OF FAILURE WHEN SUBJECTED TO A LOAD OF 500 lbs AT THE CENTER OF AND PERPENDICULAR TO ANY SIDE WITH THE OPPOSITE SIDE UNIFORMLY SUPPORTED. TEST LOAD SHALL BE APPLIED AS IN NOTE No. 16 ABOVE.
- TWO PULL BOXES MAY BE SELECTED FROM EACH LOT OF ONE HUNDRED DELIVERED, AND USED FOR TEST PURPOSES. FAILURE OF ANY TEST PULL BOX MAY BE CAUSE FOR REJECTION OF THE LOT.
- WHERE A PULL BOX WITH EXTENSION IS SPECIFIED IN THE PLANS, IT MAY CONSIST OF A SECOND PULL BOX INSTALLED IMMEDIATELY BENEATH THE FIRST, OR IT MAY BE A DIFFERENT PART WHICH MEETS THE APPLICABLE DIMENSIONS AND SPECIFICATIONS OF THIS PLAN.
- PULL BOXES SHALL BE INSTALLED ON A BED OF 1" CRUSHED ROCK WHICH SHALL BE A MINIMUM OF 12" DEPTH WHICH SHALL EXTEND A MINIMUM OF 6" BEYOND THE PULL BOX SIDES.



BOX SIDE VIEW CROSS SECTION



BOX END VIEW CROSS SECTION

LETTER	DESCRIPTION	TYPE 2		TYPE 3	
		DIMENSION	TOLERANCE	DIMENSION	TOLERANCE
A	BOX LENGTH, INSIDE	20"	+ 0	28"	+ 0
B	BOX WIDTH, INSIDE	10"	+ 0	16"	+ 0
C	LID OPENING LENGTH	22"	1/8" 0	30"	1/8" 0
D	LID OPENING WIDTH	12"	1/8" 0	18"	1/8" 0
E	LID LENGTH	21 7/8"	0 1/8"	29 7/8"	0 1/8"
F	LID WIDTH	11 7/8"	0 1/8"	17 7/8"	0 1/8"
G	BOX THICKNESS	1"	+ 0	1 1/2"	+ 0

LETTER	DESCRIPTION	TYPE 2		TYPE 3	
		DIMENSION	TOLERANCE	DIMENSION	TOLERANCE
H	BOX, LIP THICKNESS	1 1/2"	+ 0	2"	+ 0
I	BOX, LID FLANGE RADIUS	1 1/4"	1/8" 1/8"	1"	1/8" 1/8"
J	BOX, CORNER RADIUS	2 7/8"	1/8" 1/8"	3"	1/2" 1/2"
K	LID, MAJOR CORNER RADIUS	1 1/8"	1/8" 1/8"	7/8"	1/8" 1/8"
L	LIFT BAR	1 REQUIRED		2 REQUIRED	

+ , 0 INDICATES GREATER THAN OR EQUAL TO DIMENSION.

SIGNAL AND LIGHTING (CITY) (ELECTRICAL DETAILS) NO SCALE E-12

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR: HASSAN MANNA
 CALCULATED/DESIGNED BY: YAGHOUB SHADROOZ
 CHECKED BY: CESAR HERNANDEZ
 REVISOR: YAGHOUB SHADROOZ
 DATE: 7/2/2010

USERNAME => frmikes1
DGN FILE => 74+280u012.dgn

RELATIVE BORDER SCALE IS IN INCHES



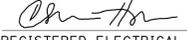
UNIT 1879

PROJECT NUMBER & PHASE

07000018691

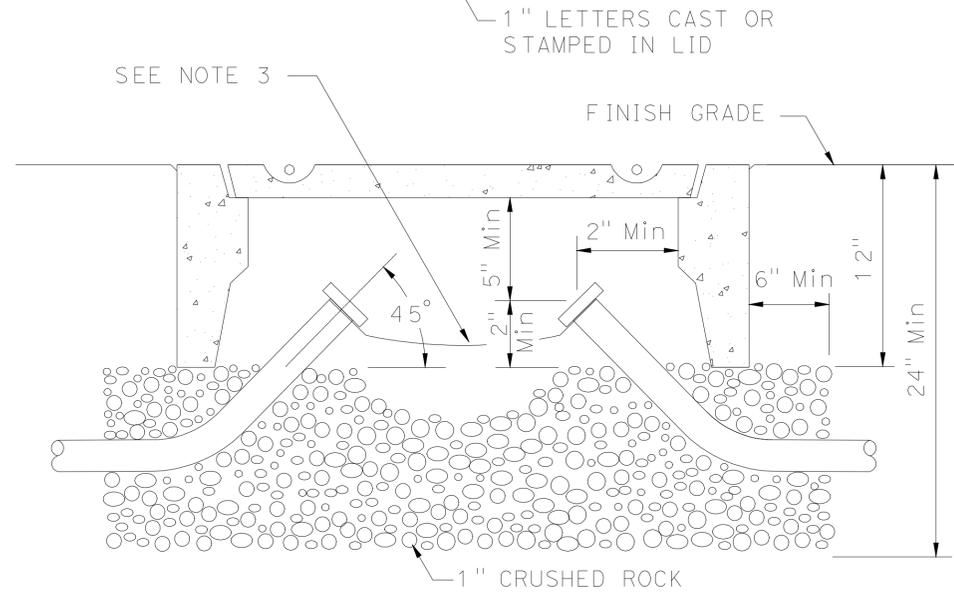
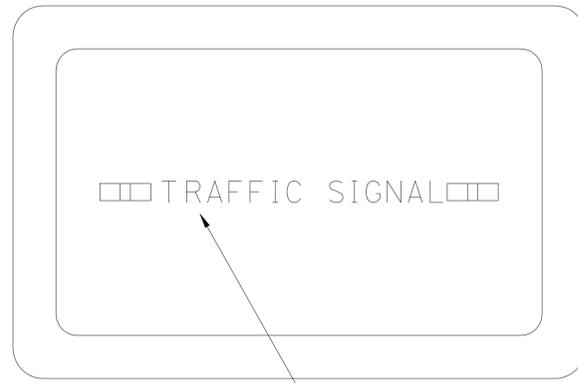
LAST REVISION | DATE PLOTTED => 09-MAR-2011
 00-00-00 | TIME PLOTTED => 09:33

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	187	4.3	22	43

 1/11/11
 REGISTERED ELECTRICAL ENGINEER DATE
 3-7-11
 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
CESAR HERNANDEZ
 No. 15805
 Exp. 12/31/12
 ELECTRICAL
 STATE OF CALIFORNIA

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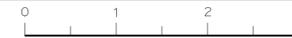
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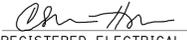
1. PULL BOX DETAILS NOT SHOWN ON THIS PLAN SHALL CONFORM TO SHEET E-19.
2. OUTSIDE DIMENSION: TYPE PB2 - 15" X 25", TYPE PB3 - 22" X 34"
3. GALVANIZED CONDUITS MUST BE BONDED WITH COPPER GROUND STRAP AROUND THE NECK OF EACH CONDUIT. PVC CONDUITS MUST HAVE THEIR GROUND WIRES SPLICED TOGETHER.

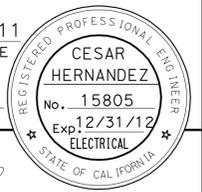
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED, DESIGNED BY	YAGHOUB SHADROOZ	REVISOR	
Caltrans TRAFFIC DESIGN	HASSAN MANNA	CHECKED BY	CESAR HERNANDEZ	DATE	

MODIFY SIGNAL AND LIGHTING
(CITY)
(ELECTRICAL DETAILS)
 NO SCALE

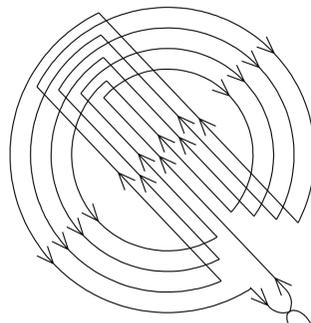
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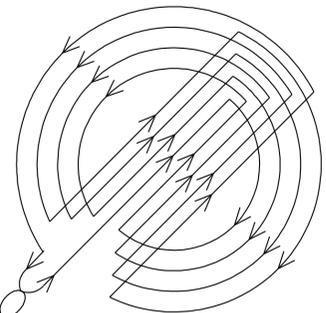
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07	LA	187	4.3	23	43
			1/11/11	DATE	
REGISTERED ELECTRICAL ENGINEER					
3-7-11			PLANS APPROVAL DATE		
<small>THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.</small>					



LOOP - 1

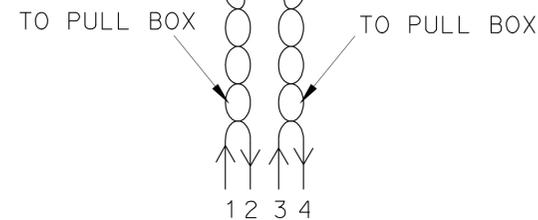


LOOP - 2



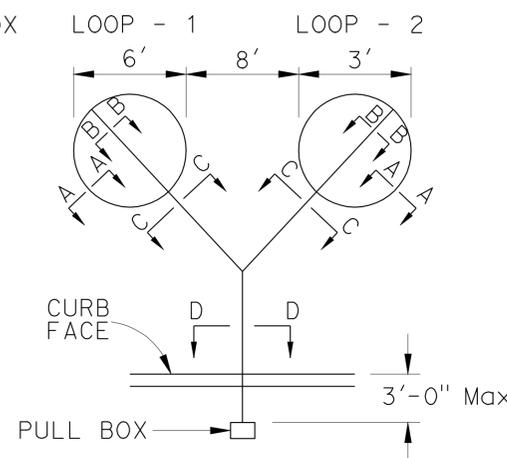
TWISTED CLOCKWISE
(AT LEAST 2 TURN PER FT)
INTO A PAIR

TWISTED CLOCKWISE
(AT LEAST 2 TURN PER FT)
INTO A PAIR

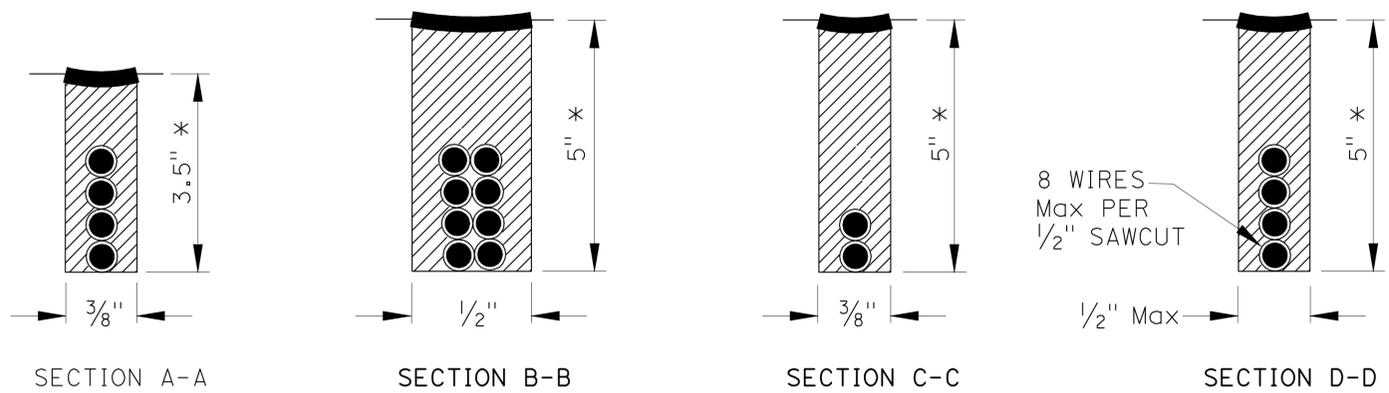


WINDING DETAIL
NOT TO SCALE

DIRECTION OF
TRAFFIC FLOW



CASE II
(BICYCLE & VEHICLE)



* DEPTH OF SLOT NOT TO EXCEED DEPTH OF PAVEMENT

NOTES:

1. INSTALL FOUR (4) COMPLETE ALTERNATING TURNS OF LOOP CONDUCTORS, UNLESS OTHERWISE SPECIFIED.
2. FOR STUB-OUT AND CONDUIT DETAILS REFER TO SHEET E-9.
3. USE CASE II LOOPS WHEN VEHICULAR LOOPS ARE INTENDED TO DETECT BICYCLES.
4. AN OCTAGONAL SHAPED LOOP OR OTHER NON-ROUND SHAPED LOOP MAY BE USED INSTEAD OF THE ROUND-LOOP.
5. SAME WINDING PATTERN TO BE USED IN BOTH LOOPS WITH (1) PAIR FROM EACH LOOP LEADING TO THE PULL BOX.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
 FUNCTIONAL SUPERVISOR: HASSAN MANNA
 CALCULATED/DESIGNED BY: YAGHOUB SHADROOZ
 CHECKED BY: CESAR HERNANDEZ
 REVISIONS: REVISED BY: DATE REVISIONS:

MODIFY SIGNAL AND LIGHTING
(CITY)
(ELECTRICAL DETAILS)
 NO SCALE

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

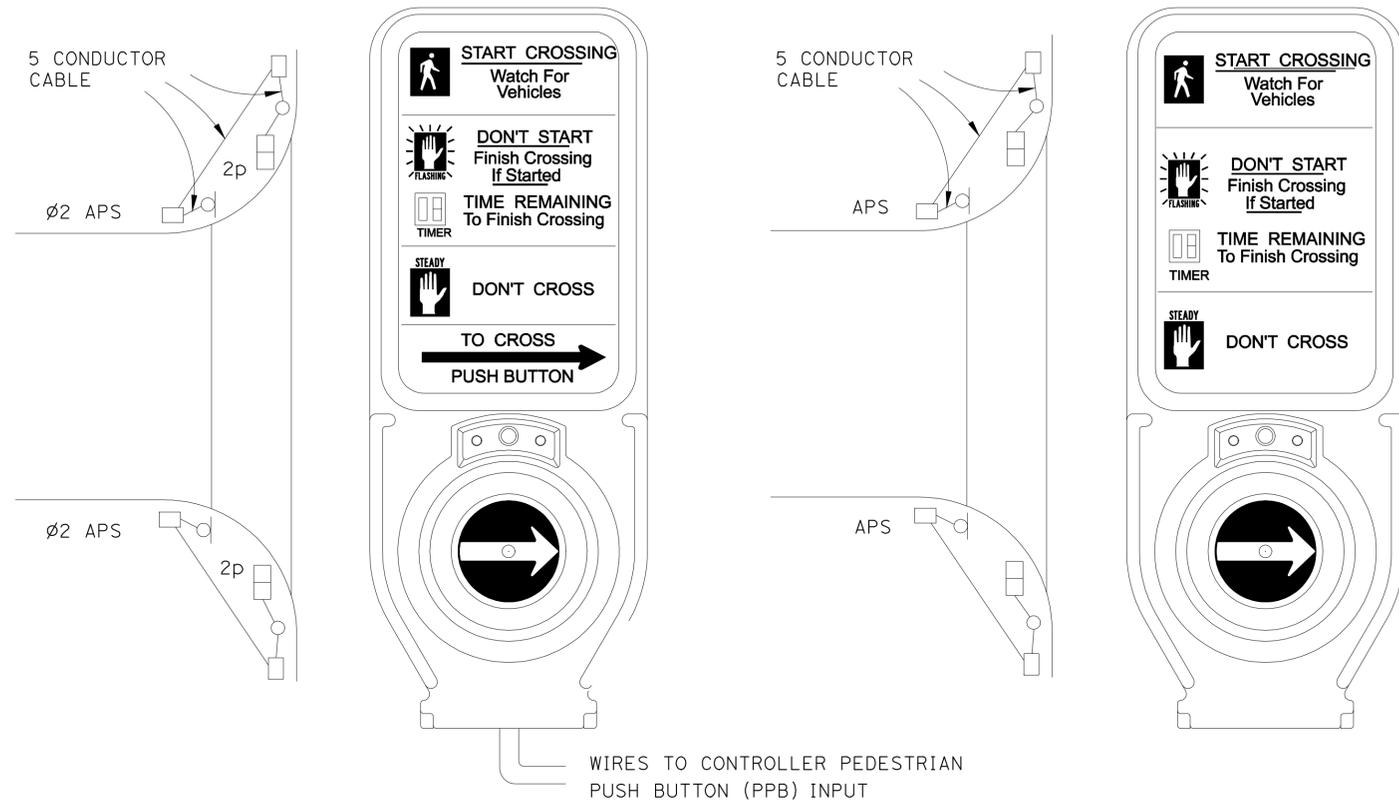


Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	187	4.3	24	43

<i>Cesar Hernandez</i>	1/11/11
REGISTERED ELECTRICAL ENGINEER	DATE
3-7-11	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
CESAR HERNANDEZ
No. 15805
Exp. 12/31/12
ELECTRICAL
STATE OF CALIFORNIA

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PED-ACTUATED PEDESTRIAN CROSSING
(PUSH BUTTON ACTIVATES ACCESSIBLE PEDESTRIAN SIGNALS AND THE WALK INTERVAL.)

PRE-TIMED AND REST-IN-WALK PEDESTRIAN CROSSING
(PUSH BUTTON ACTIVATES ACCESSIBLE PEDESTRIAN SIGNALS ONLY. WALK INTERVAL IS ON RECALL.)

NOTES:

1. APS SHALL BE USED FOR SITUATIONS WHERE NEW PEDESTRIAN PUSH BUTTONS ARE BEING INSTALLED OR WHERE THEY ARE BEING REPLACED, DUE TO MAINTENANCE.
2. COUNTDOWN PEDESTRIAN HEADS SHALL BE INSTALLED AT ALL ACCESSIBLE PEDESTRIAN SIGNAL LOCATIONS.
3. A SEPARATE 5 CONDUCTOR CABLE SHALL BE USED TO ISOLATE FROM ANY OTHER WIRES.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED, DESIGNED BY	REVISOR
Caltrans TRAFFIC DESIGN	HASSAN MANNA	CHECKED BY	DATE
		YAGHOUB SHADROOZ	YAGHOUB SHADROOZ
		CESAR HERNANDEZ	CESAR HERNANDEZ

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.



UNIT 1879

PROJECT NUMBER & PHASE

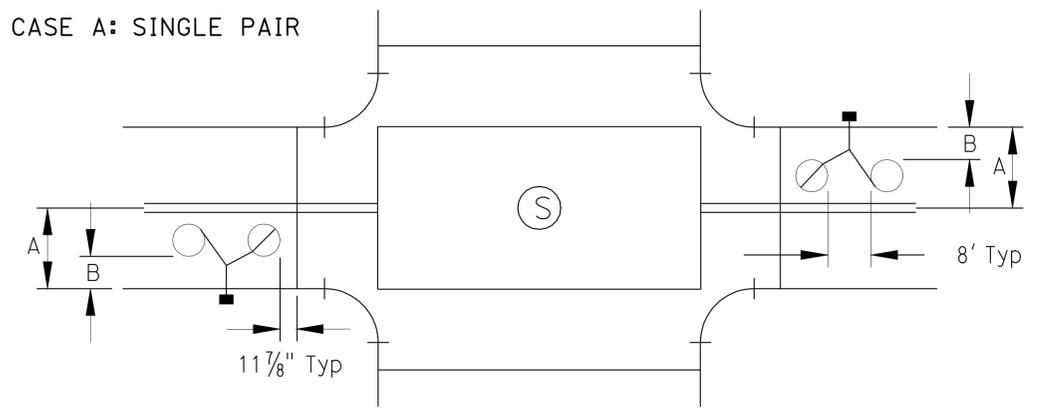
07000018691

**MODIFY SIGNAL AND LIGHTING
(CITY)
(ELECTRICAL DETAILS)
NO SCALE**

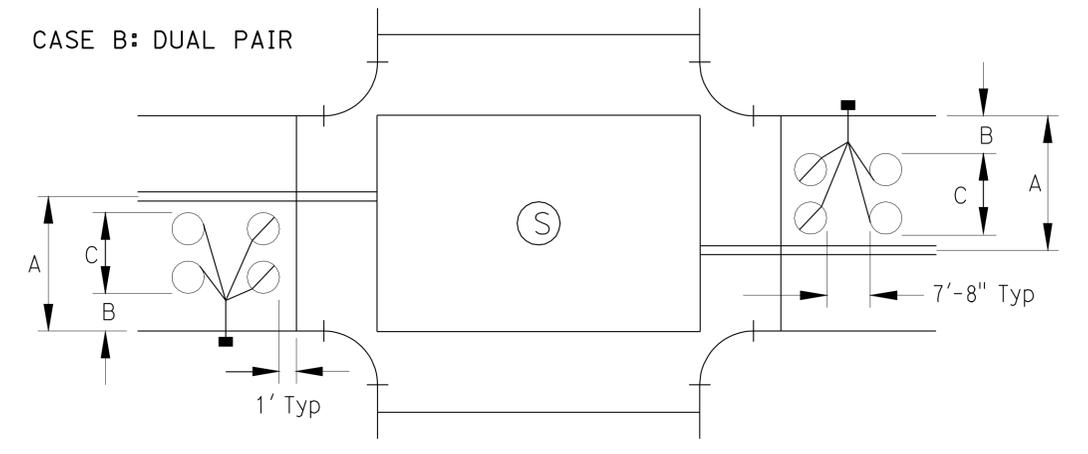
E-15

BASED ON THE DISTANCE BETWEEN THE DOUBLE YELLOW CENTER LINE (DYCL) AND THE CURB FACE, 6'-0" DIAMETER CIRCULAR INDUCTIVE LOOP DETECTORS SHOULD BE INSTALLED AS SPECIFIED IN THE TABLES BELOW FOR SINGLE LANE APPROACHES.

CASE A: SINGLE PAIR



CASE B: DUAL PAIR



Distance Between DYCL and Curb Face (A)	No. of Pairs of Loops	Distance Between Loop and Curb Face (B)
9'-8"	1	3"
11'	1	3"
12'	1	3"
13'	1	4"
14'	1	5"

Distance Between DYCL and Curb Face (A)	No. of Pairs of Loops	Distance Between Loop and Curb Face (B)
15'	1	6'
16'	1	6'
17'	1	6'-8"
18'	1	7'-8"
19'	1	7'-8"

Distance Between DYCL and Curb Face (A)	No. of Pairs of Loops	Distance Between Loop and Curb Face (B)	Distance Between Loops (C)
20'	2	3'	15'
21'	2	3'	15'
22'	2	3'	16'
23'	2	3'	16'
24'	2	4'	16'
25'	2	5'	16'

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 CALCULATED/DESIGNED BY: YAGHOUB SHADROOZ
 CHECKED BY: CESAR HERNANDEZ
 REVISED BY: [] DATE: []
 REVISIONS: []

MODIFY SIGNAL AND LIGHTING
(CITY)
(ELECTRICAL DETAILS)
 NO SCALE

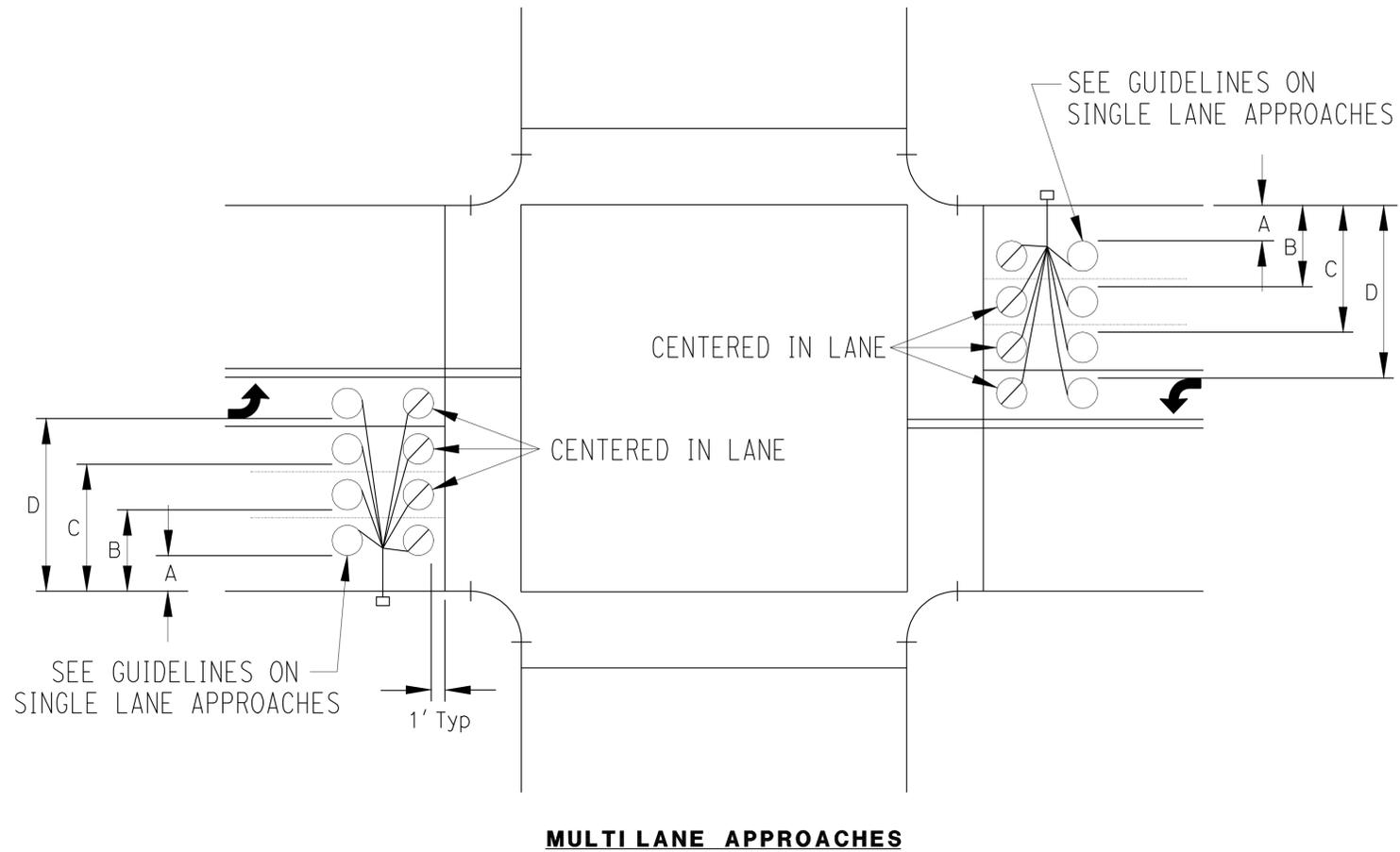
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	LA	187	4.3	26	43

<i>Cesar Hernandez</i>	1/11/11
REGISTERED ELECTRICAL ENGINEER	DATE
3-7-11	
PLANS APPROVAL DATE	

REGISTERED PROFESSIONAL ENGINEER
CESAR HERNANDEZ
No. 15805
Exp. 12/31/12
ELECTRICAL
STATE OF CALIFORNIA

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NOTES:

1. ALL LOOPS ARE 6' Dia. WITH 7'-8" SEPARATION.
2. THE LOOP DETECTORS ADJACENT TO THE LIMIT LINE SHALL BE BICYCLE DETECTORS.

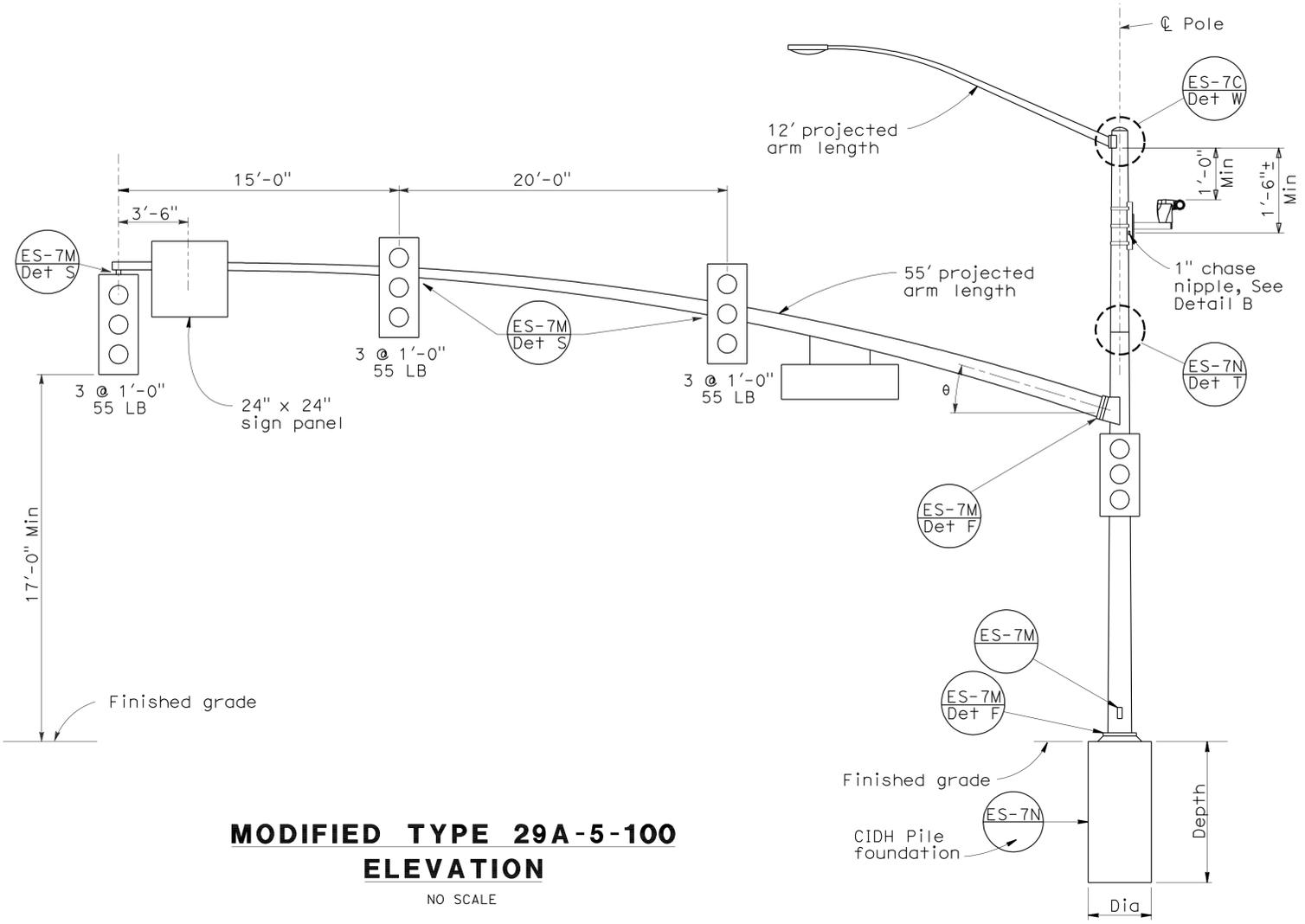
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans TRAFFIC DESIGN
FUNCTIONAL SUPERVISOR HASSAN MANNA
CALCULATED, DESIGNED BY CHECKED BY
YAGHOUB SHADROOZ CESAR HERNANDEZ
REVISED BY DATE REVISED

**MODIFY SIGNAL AND LIGHTING
(CITY)
(ELECTRICAL DETAILS)
NO SCALE**

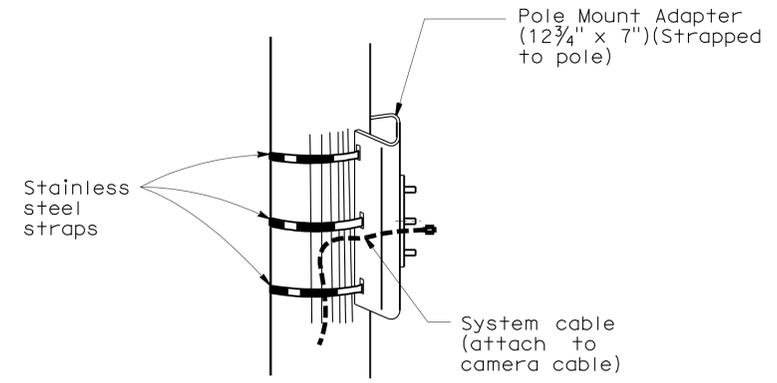
E-17

THIS PLAN IS ACCURATE FOR ELECTRICAL WORK ONLY.

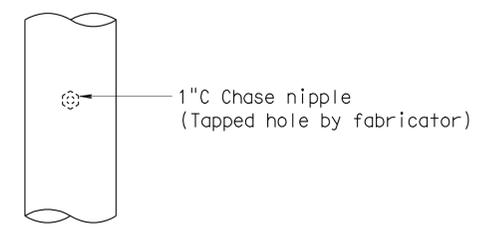
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
07	LA	187	4.3	27	43
<i>Eliseo Lopez</i> REGISTERED CIVIL ENGINEER			2-1-11	DATE	
3-7-11 PLANS APPROVAL DATE					
No. C72910 Exp. 12/31/12 CIVIL			REGISTERED PROFESSIONAL ENGINEER ELISEO LOPEZ STATE OF CALIFORNIA		
<small>The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.</small>					



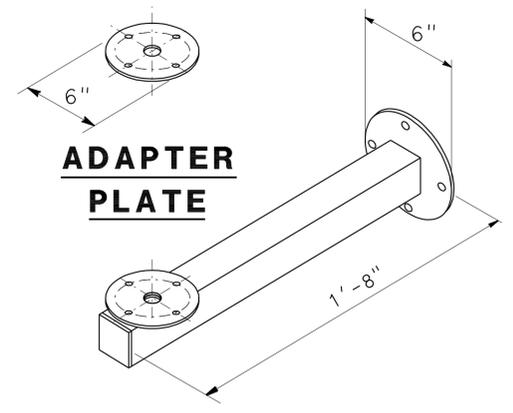
**MODIFIED TYPE 29A-5-100
ELEVATION**
NO SCALE



**DETAIL A
CAMERA POLE MOUNTING DETAIL**
NO SCALE

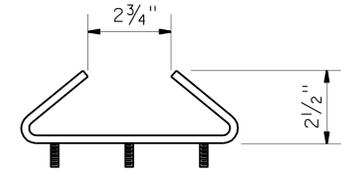


**DETAIL B
TYPICAL ELECTRICAL
ACCESS DETAIL**
NO SCALE

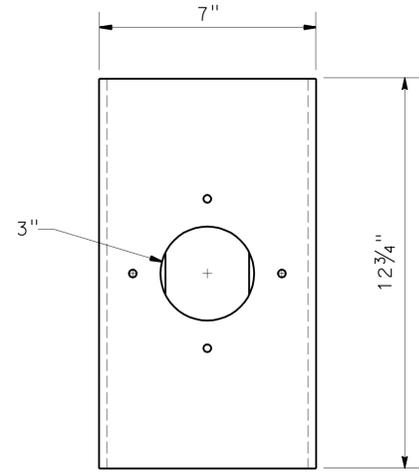


**ADAPTER
PLATE**

WALL MOUNT ARM
NO SCALE



PLAN VIEW



**POLE MOUNT ADAPTER
FRONT VIEW**
NO SCALE

GENERAL NOTES:

SPECIFICATIONS

Design: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals dated 2001.

LOADING

Wind Loadings: 100 MPH

UNIT STRESSES

Structural Steel: $f_y = 48,000$ psi tapered steel tube
 $f_y = 36,000$ psi unless otherwise noted.

Anchor bolts = A307

Reinforced Concrete: $f'_c = 3,600$ psi
 $f_y = 60,000$ psi

NOTES:

- For details not shown, see "2006 STANDARD PLANS", "2006 REVISED STANDARD PLANS" and RSP ES-7G.
- For Modified Type 29A-5-100 pole locations, see "PROJECT PLANS" AND RSP-7G.
- All steel shall be galvanized after fabrication.
- During pole erection the post shall be raked as necessary with the use of leveling nuts to provide a plumb pole axis.
- Foundation design is based on AASHTO 2001 article 13.6 Broms' approximate procedure assuming a cohesionless material. The angle of internal friction used is 30 degrees and unit weight of soil used is 120 lbs/ft³.
- CCTV camera and mounting details per manufacturers specifications.
- Attach CCTV camera adapter plate and the wall mount arm with flat washer, lock washer and nut.
- Attach the wall mount arm to the pole mount adapter with flat washer, lock washer and nut.
- For additional mounting details see manufacturers specifications.

THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

BRANCH CHIEF *Jeffrey B. Woody*

DESIGN	BY E LOPEZ	CHECKED A GUTIERREZ
DETAILS	BY D W JUSTICE Jr	CHECKED E LOPEZ
QUANTITIES	BY	CHECKED

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
DESIGN AND TECHNICAL SERVICES
SPECIAL DESIGNS BRANCH **A**

BRIDGE NO.	
POST MILE	

**MODIFIED TYPE 29A-5-100
POLE DETAILS**

SES-1

(ENGLISH) SPECIAL DESIGNS BRANCH BORDER SHEET (REV. 7-1-09)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3620
PROJECT NUMBER & PHASE: 0700001869-1
CONTRACT NO.: 07-4T2801

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES	SHEET	OF
1-28-11	1-31-11	2-1-11

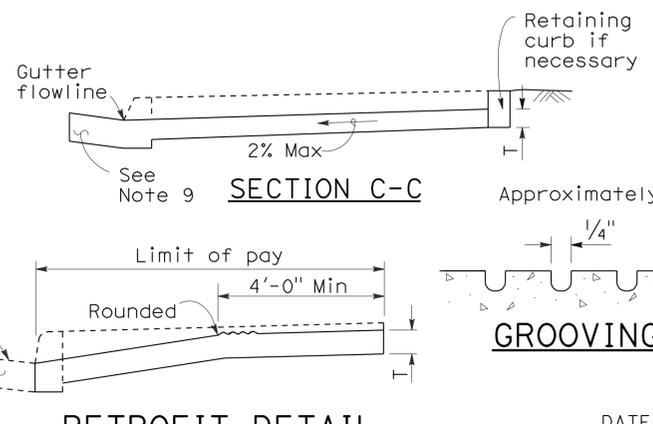
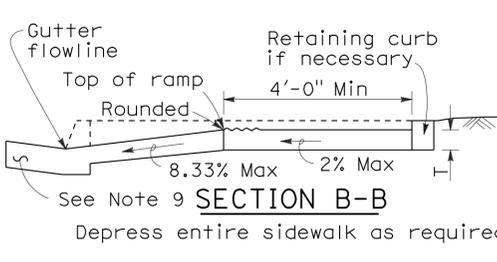
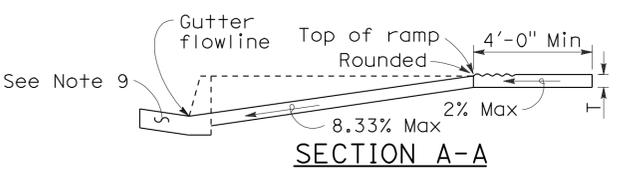
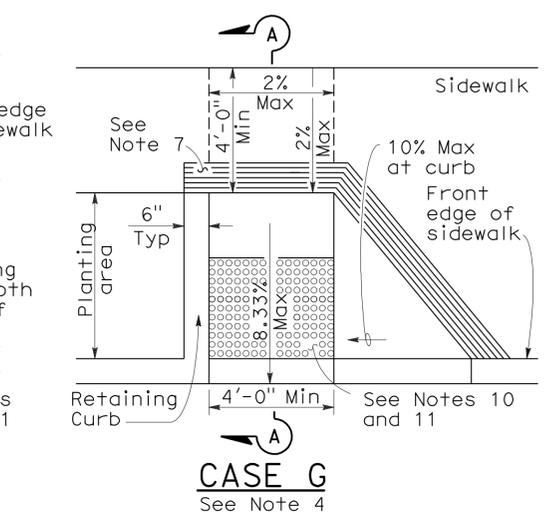
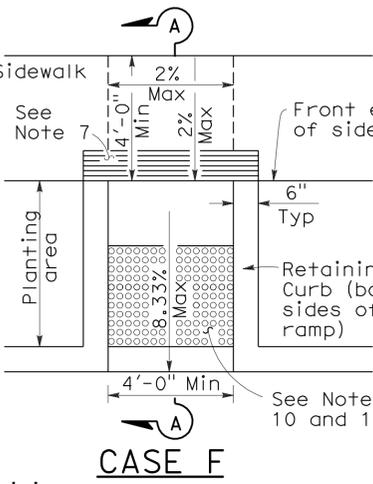
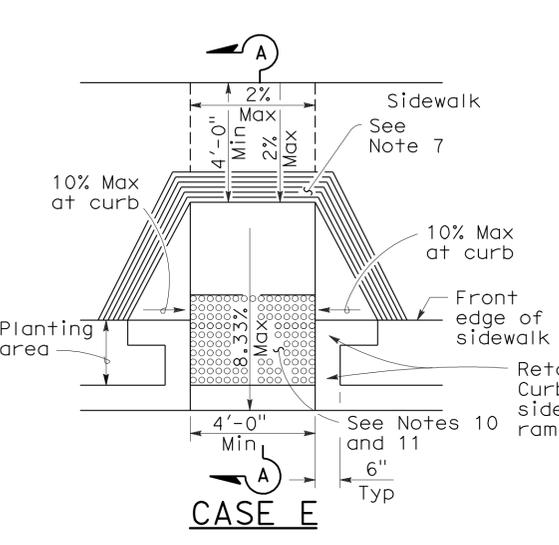
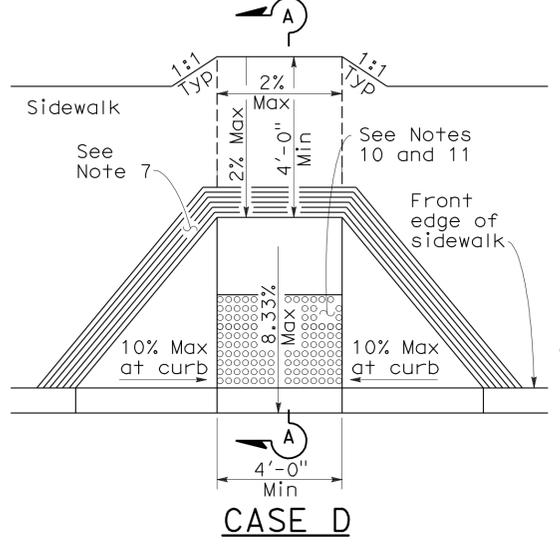
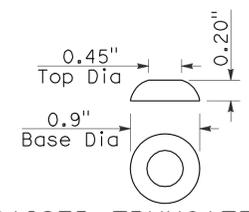
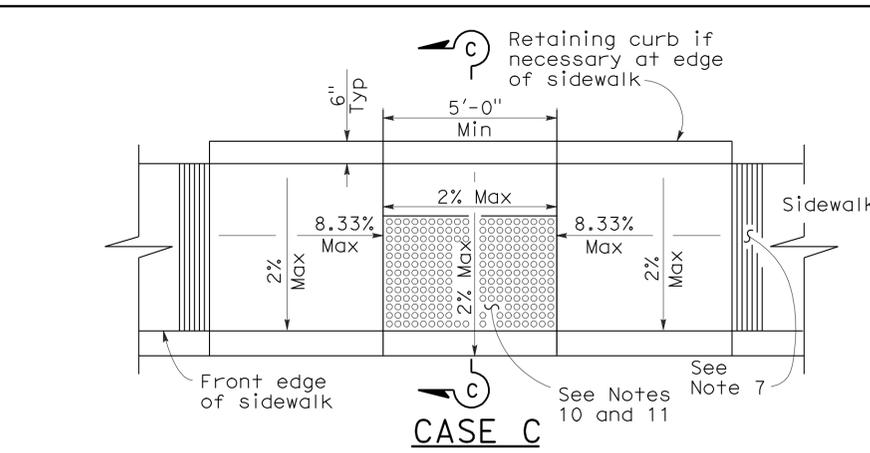
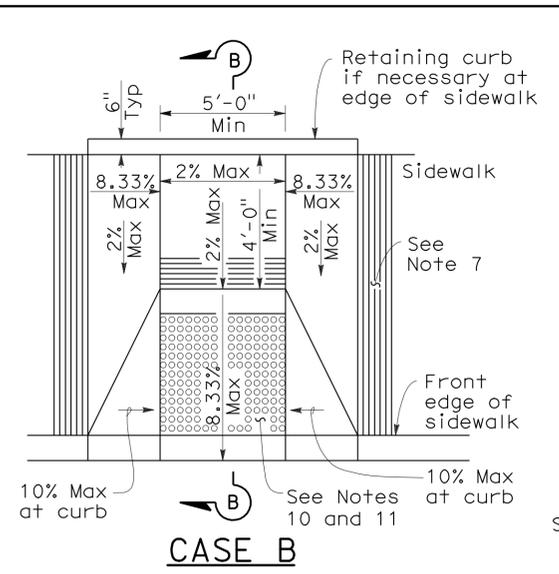
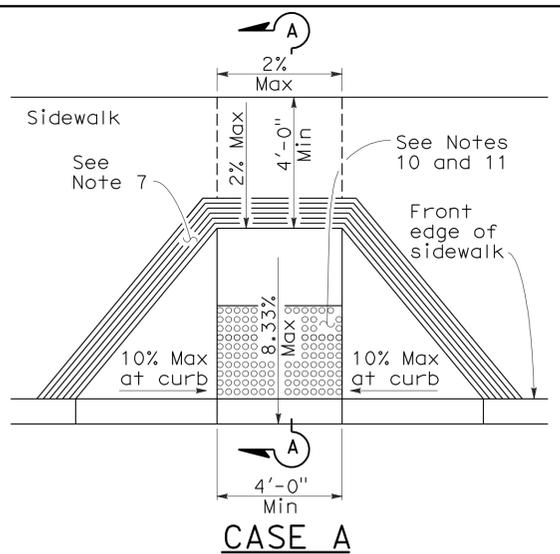
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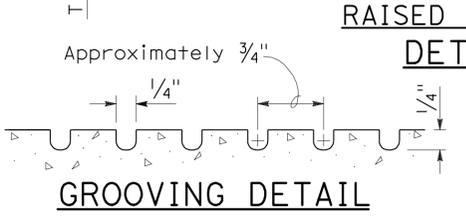
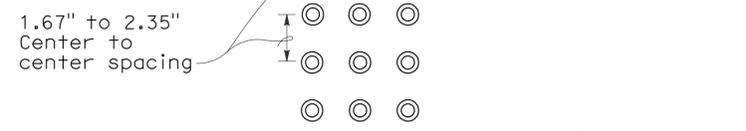
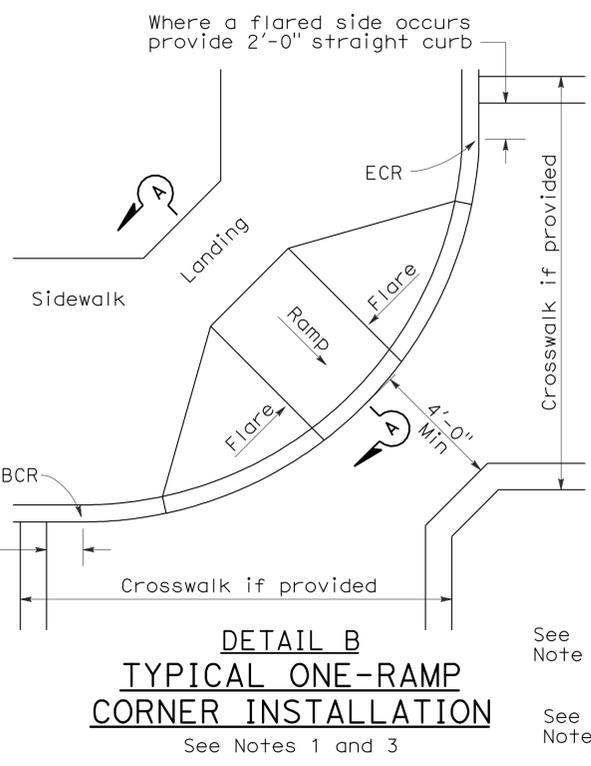
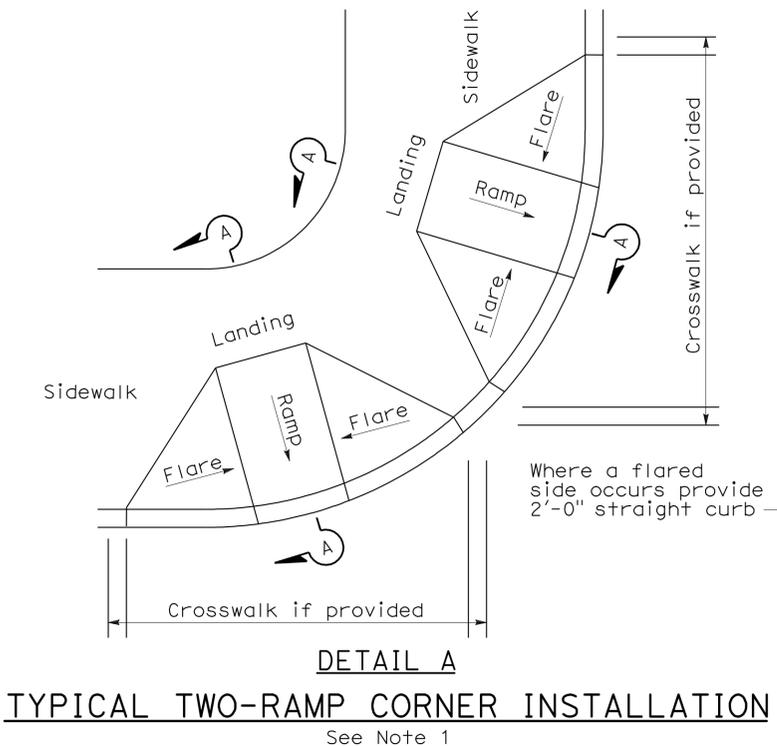
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	187	4.3	28	43

H. David Cordova
 REGISTERED CIVIL ENGINEER
 September 1, 2006
 PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER
Hector David Cordova
No. C41957
Exp. 3-31-08
CIVIL
STATE OF CALIFORNIA



- NOTES:**
- As site conditions dictate, Case A through Case G curb ramps may be used for corner installations similar to those shown in Detail A and Detail B. The case of curb ramps used in Detail A do not have to be the same. Case A through Case G curb ramps also may be used at mid block locations, as site conditions dictate.
 - If distance from curb to back of sidewalk is too short to accommodate ramp and 4'-0" platform (landing) as shown in Case A, the sidewalk may be depressed longitudinally as in Case B, or C or may be widened as in Case D.
 - When ramp is located in center of curb return, crosswalk configuration must be similar to that shown for Detail B.
 - As site conditions dictate, the retaining curb side and the flared side of the Case G ramp shall be constructed in reversed position.
 - If located on a curve, the sides of the ramp need not be parallel, but the minimum width of the ramp shall be 4'-0".
 - Side slope of ramp flares vary uniformly from a maximum of 10% at curb to conform with longitudinal sidewalk slope adjacent to top of the ramp, except in Case C and Case F.
 - The curb ramp shall be outlined, as shown, with a 1'-0" wide border with 1/4" grooves approximately 3/4" on center. See grooving detail.
 - Transitions from ramps and landing to walks, gutters or streets shall be flush and free of abrupt changes.
 - Maximum slopes of adjoining gutters, the road surface immediately adjacent to the curb ramp or accessible route shall not exceed 5 percent within 4'-0" of the top and bottom of the curb ramp.
 - Curb ramps shall have a detectable warning surface that extends the full width and 3'-0" depth of the ramp. Detectable Warning Surfaces shall conform to the details on this plan and the requirements in the Special Provisions.
 - The edge of the detectable warning surface nearest the street shall be between 6" and 8" from the gutter flowline.
 - Sidewalk and ramp thickness, "T", shall be 3/2" minimum.
 - Utility pull boxes, manholes, vaults and all other utility facilities within the boundaries of the curb ramp will be relocated or adjusted to grade by the owner prior to, or in conjunction with, curb ramp construction.
 - For retrofit conditions, removal and replacement of curb apron will be at the Contractor's option, unless otherwise shown on project plans.



CURB RAMP DETAILS
NO SCALE

RSP A88A DATED SEPTEMBER 1, 2006 SUPERSEDES STANDARD PLAN A88A DATED MAY 1, 2006 - PAGE 115 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP A88A

2006 REVISED STANDARD PLAN RSP A88A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	187	4.3	29	43

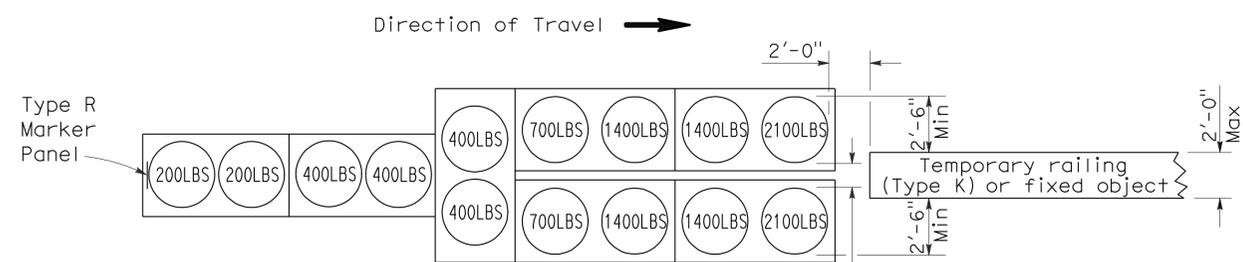
Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

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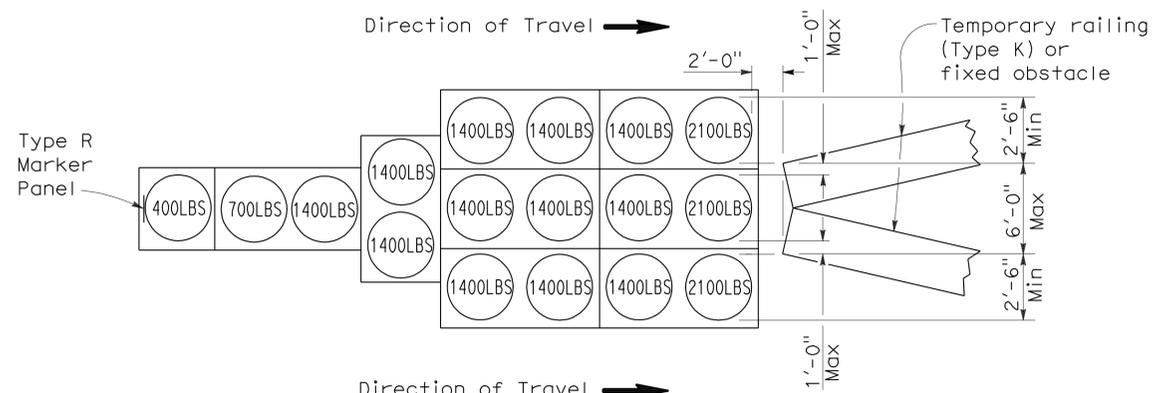
REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-09
CIVIL
STATE OF CALIFORNIA

To accompany plans dated 3-7-11



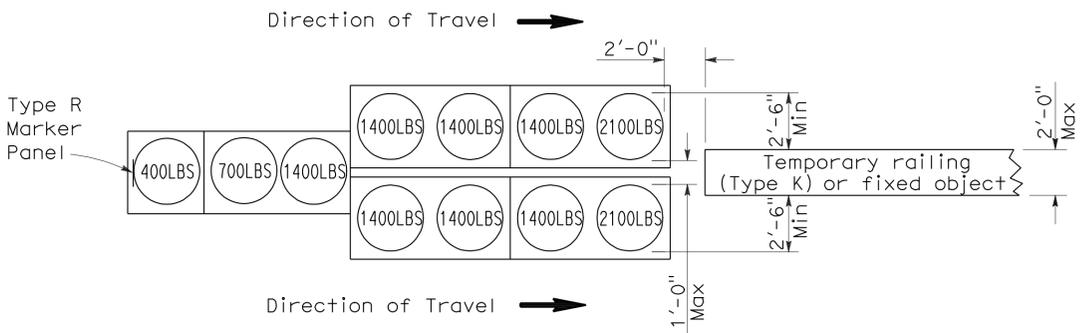
ARRAY 'TU14'

Approach speed 45 mph or more



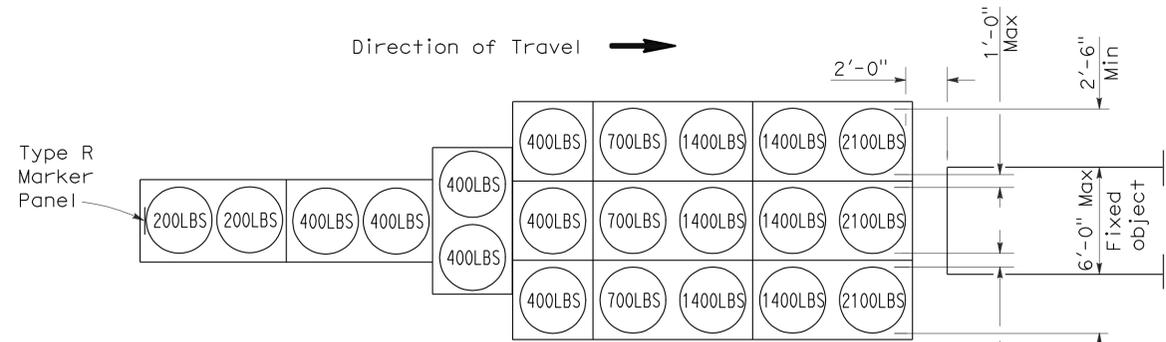
ARRAY 'TU17'

Approach speed less than 45 mph



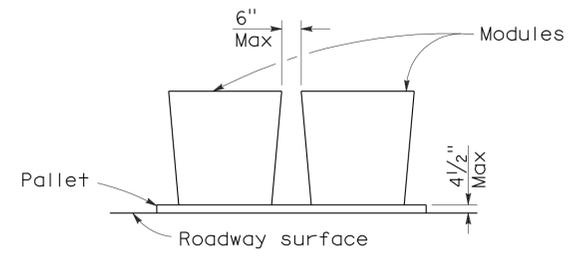
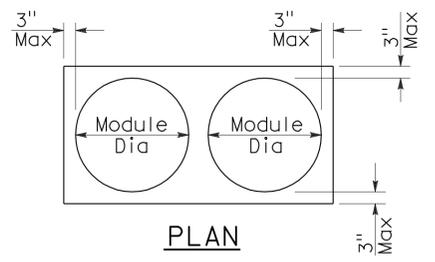
ARRAY 'TU11'

Approach speed less than 45 mph



ARRAY 'TU21'

Approach speed 45 mph or more



CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. Temporary crash cushion arrays shall not encroach on the traveled way.
4. Place the top of Type R marker panel 1" below the module lid.
5. Refer to Standard Plan A73B for marker details.
6. Approach speeds indicated conform to NCHRP 350 Report criteria.
7. Use of pallets is optional.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**TEMPORARY CRASH CUSHION,
SAND FILLED
(UNIDIRECTIONAL)**

NO SCALE

RSP T1A DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T1A
DATED MAY 1, 2006 - PAGE 211 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T1A

2006 REVISED STANDARD PLAN RSP T1A

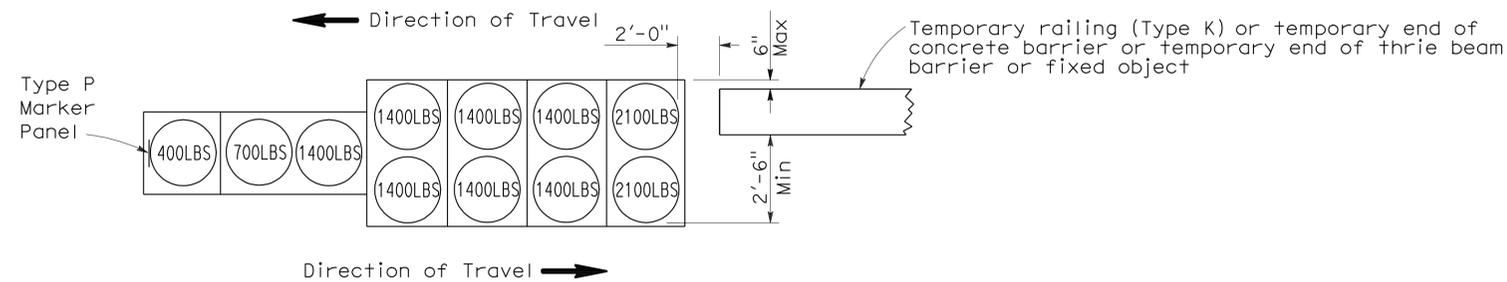
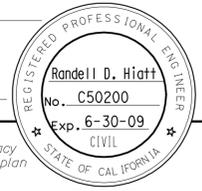
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	187	4.3	30	43

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

June 6, 2008
PLANS APPROVAL DATE

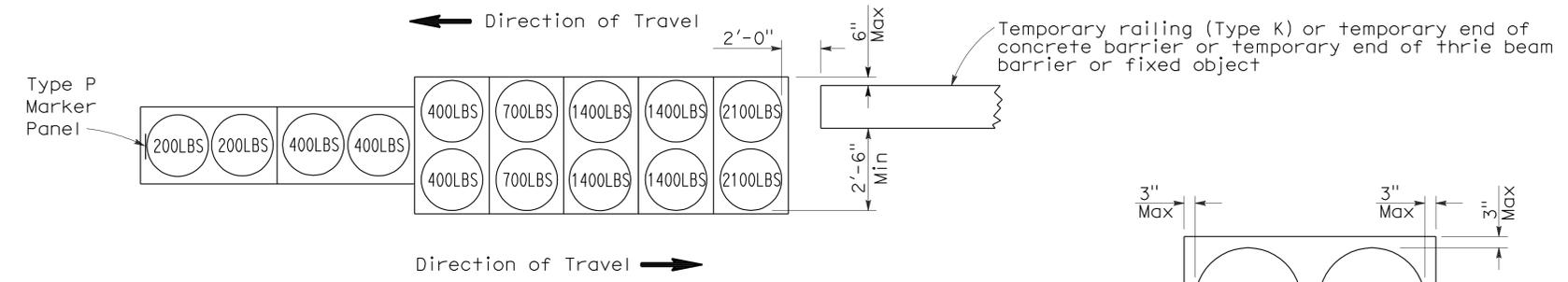
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 3-7-11



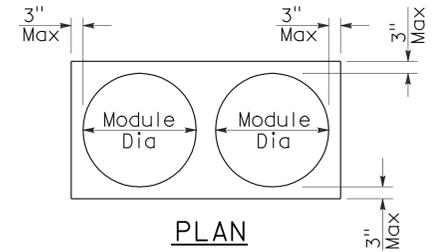
ARRAY 'TB11'

Approach speed less than 45 mph

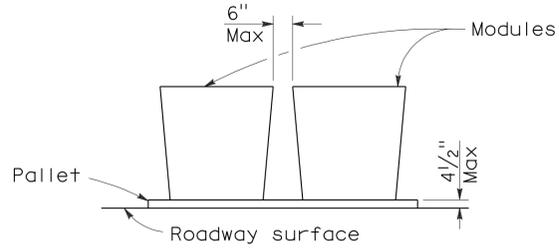


ARRAY 'TB14'

Approach speed 45 mph or more



PLAN



ELEVATION

CRASH CUSHION PALLET DETAIL

See Note 7

NOTES:

1. (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
2. All sand weights are nominal.
3. Temporary crash cushion arrays shall not encroach on the traveled way.
4. Place the Type P marker panel so that the bottom of the panel rests upon the pallet.
5. Refer to Standard Plan A73B for marker details.
6. Approach speeds indicated conform to NCHRP 350 Report criteria.
7. Use of pallets is optional.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**TEMPORARY CRASH CUSHION,
SAND FILLED
(BIDIRECTIONAL)**

NO SCALE

RSP T1B DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T1B
DATED MAY 1, 2006 - PAGE 212 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T1B

2006 REVISED STANDARD PLAN RSP T1B

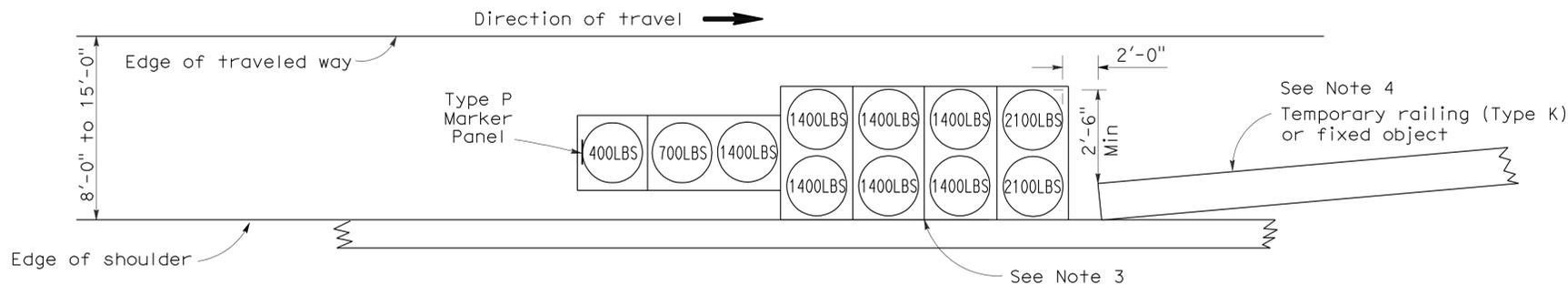
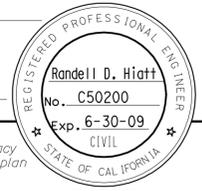
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	187	4.3	31	43

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

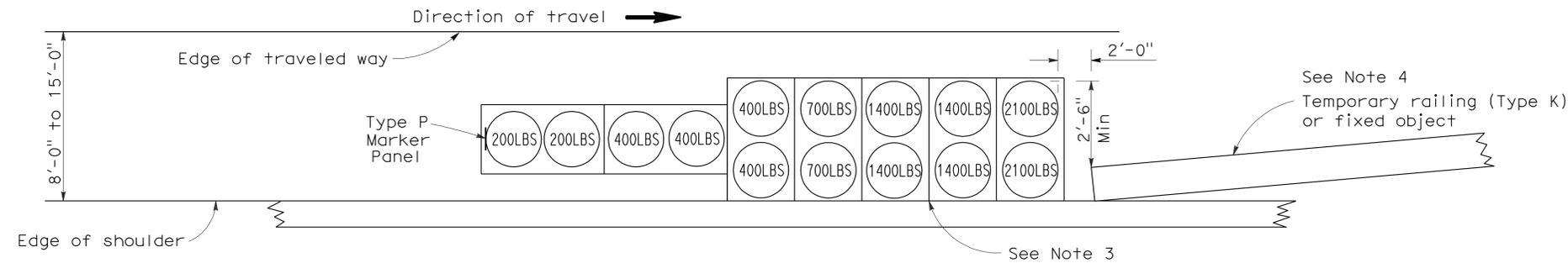
June 6, 2008
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

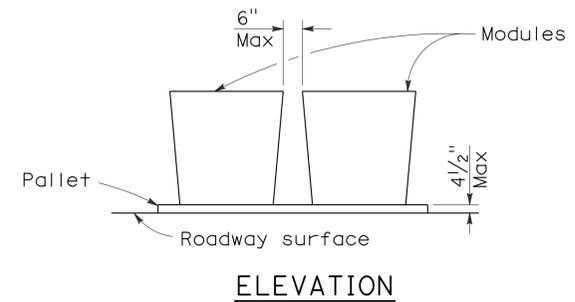
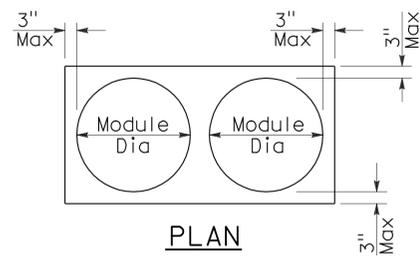
To accompany plans dated 3-7-11



ARRAY 'TS11'
Approach speed less than 45 mph
See Note 9



ARRAY 'TS14'
Approach speed 45 mph or more
See Note 9



CRASH CUSHION PALLET DETAIL
See Note 11

NOTES:

- (XXX) Indicates sand filled module location and weight of sand in pounds for each module. Module spacing is based on the greater diameter of the module.
- All sand weights are nominal.
- The temporary crash cushion arrays shown on this plan shall be used only in locations where there will be traffic on one side of the temporary crash cushion array.
- If the fixed object or approach end of the temporary railing is less than 15'-0" from the edge of traveled way, a temporary crash cushion is required in a construction or work zone.
- Temporary crash cushion arrays shall not encroach on the traveled way.
- Arrays for median shoulders shall conform to details shown on this plan for outside shoulders.
- Place the Type P marker panel so that the bottom of the panel rests upon the pallet and faces traffic.
- Refer to Standard Plan A73B for marker details.
- For shoulder widths less than 8'-0", appropriate approved crash cushion protection, other than sand filled modules, shall be provided at fixed objects and at approach ends of temporary railing. The specific type of crash cushion shall be as shown on the project plans or as specified in the Special Provisions, or if not shown on the project plans or specified in the Special Provisions, shall be as approved by the Engineer.
- Approach speeds indicated conform to NCHRP 350 Report criteria.
- Use of pallets is optional.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**TEMPORARY CRASH CUSHION,
SAND FILLED
(SHOULDER INSTALLATIONS)**

NO SCALE
RSP T2 DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN T2
DATED MAY 1, 2006 - PAGE 213 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP T2

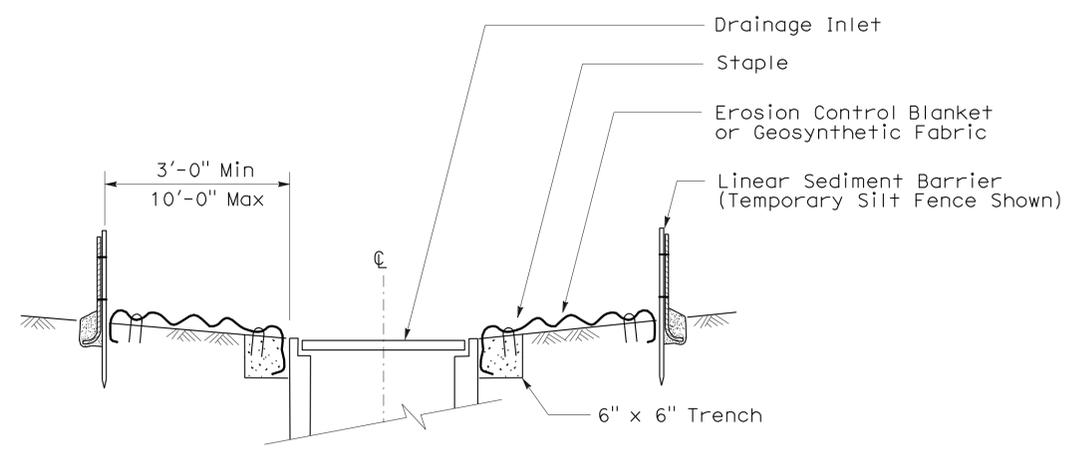
2006 REVISED STANDARD PLAN RSP T2

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	187	4.3	32	43

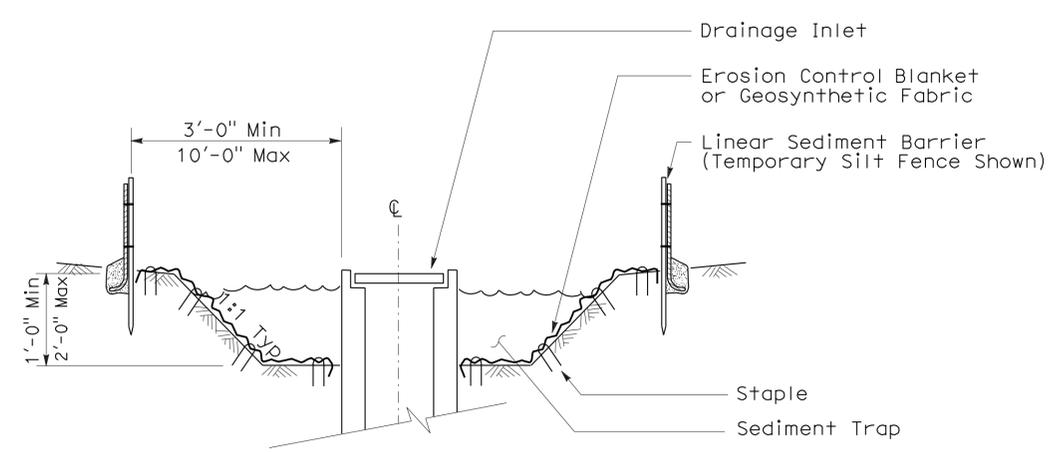
Robert B. Schott
 LICENSED LANDSCAPE ARCHITECT
 August 15, 2008
 PLANS Approval DATE
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To accompany plans dated 3-7-11

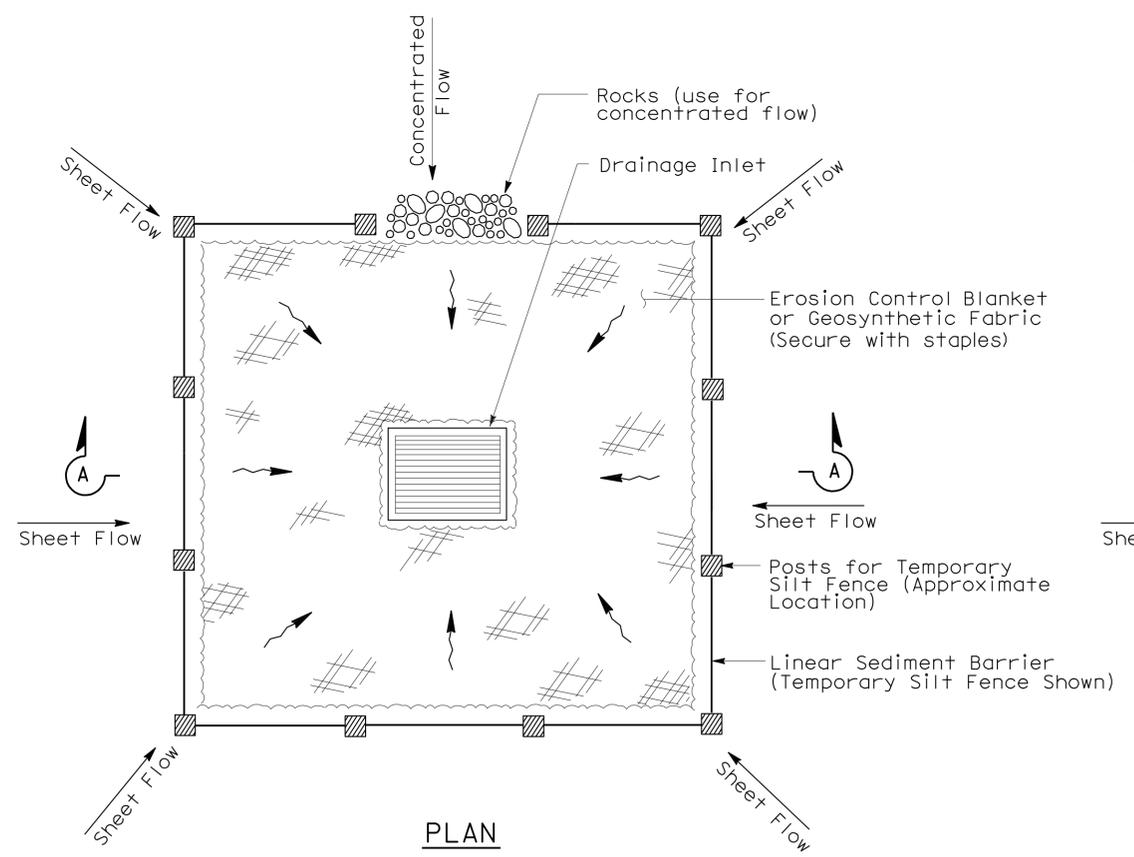
- NOTES:**
- See Standard Plan T51 for Temporary Silt Fence.
 - Dimensions may vary to fit field conditions.



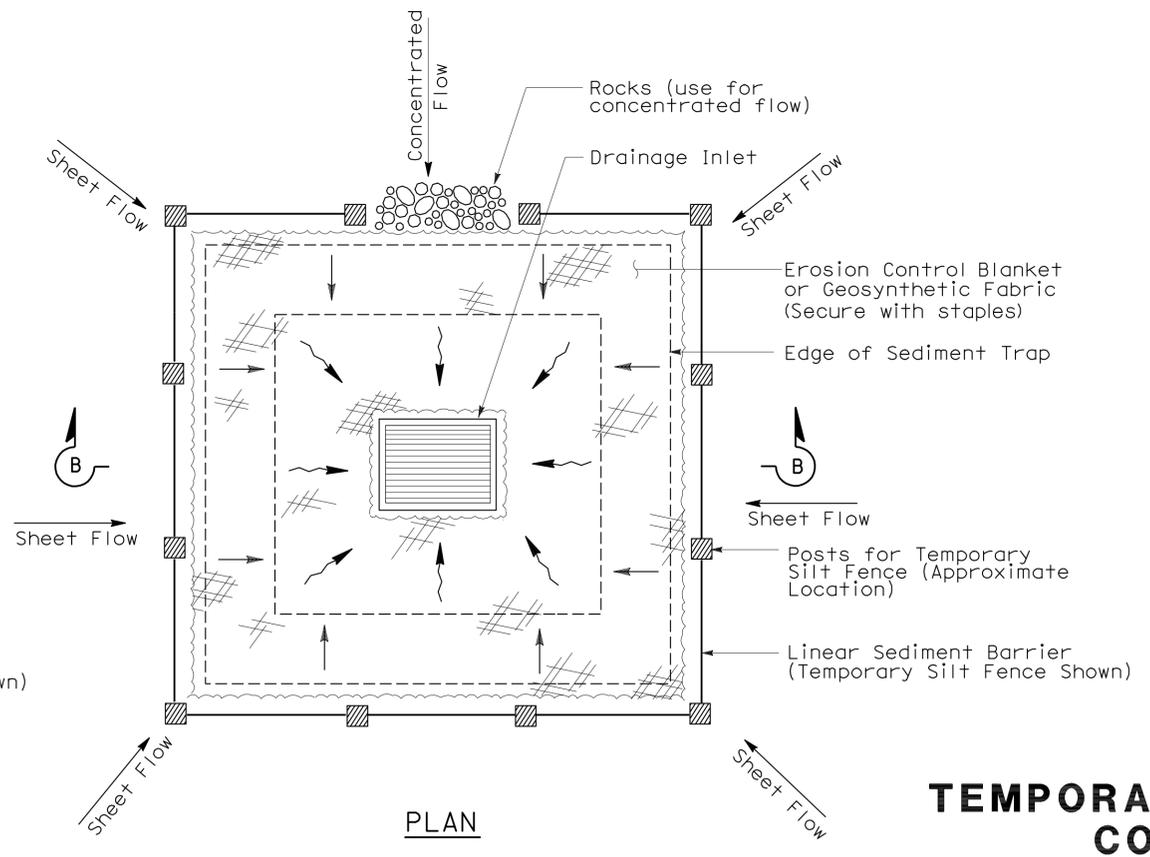
SECTION A-A



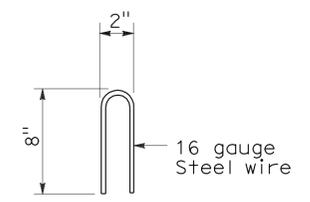
SECTION B-B



TEMPORARY DRAINAGE INLET PROTECTION (TYPE 1)



TEMPORARY DRAINAGE INLET PROTECTION (TYPE 2) (EXCAVATED SEDIMENT TRAP)



STAPLE DETAIL

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)

NO SCALE

NSP T61 DATED AUGUST 15, 2008 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

2006 NEW STANDARD PLAN NSP T61

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	187	4.3	33	43

Robert B. Schott
 LICENSED LANDSCAPE ARCHITECT

August 15, 2008
 PLANS APPROVAL DATE

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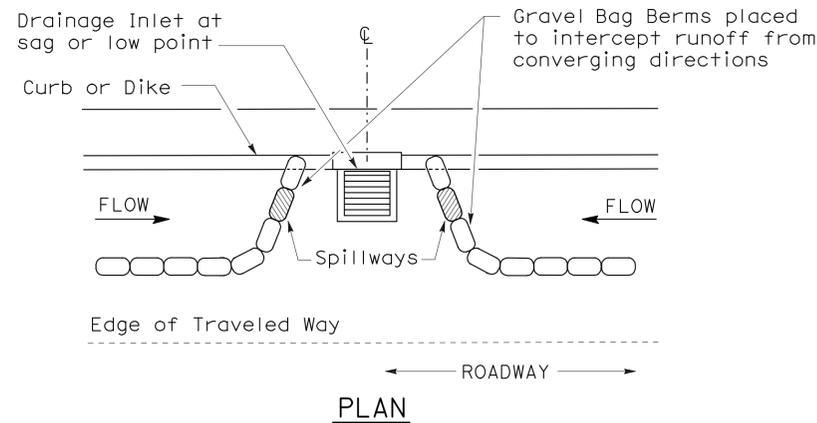
To accompany plans dated 3-7-11

2006 NEW STANDARD PLAN NSP T62

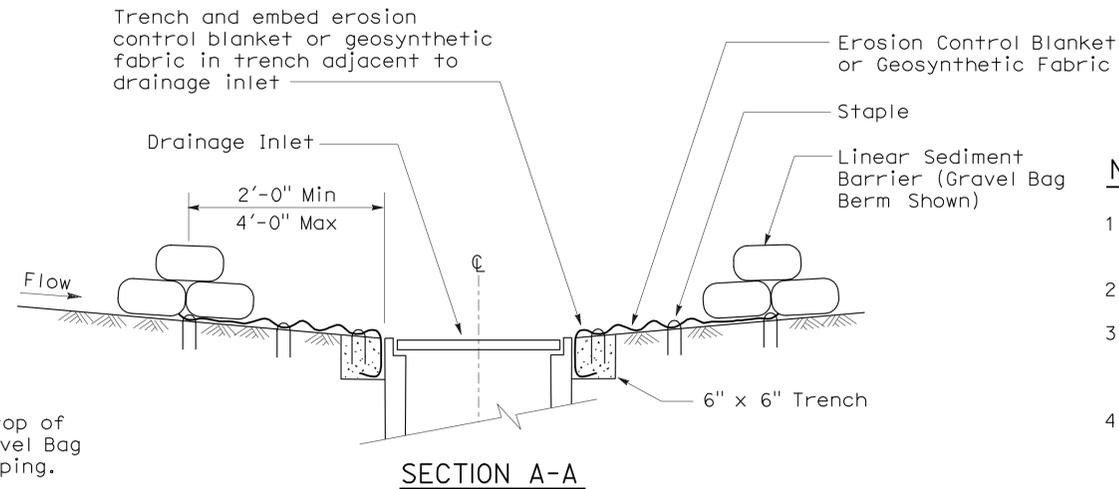
GRAVEL BAG BERM (TYPE 3A) SPACING TABLE

SLOPE OF ROADWAY (PERCENT)	1 to 3.9	4 to 5.9	6 to 7.9	8 to 10	10+
INTERVAL BETWEEN BERM	100'	75'	50'	25'	12'

For slope of less than 1%, install barriers only if erosion/sediment is prevalent



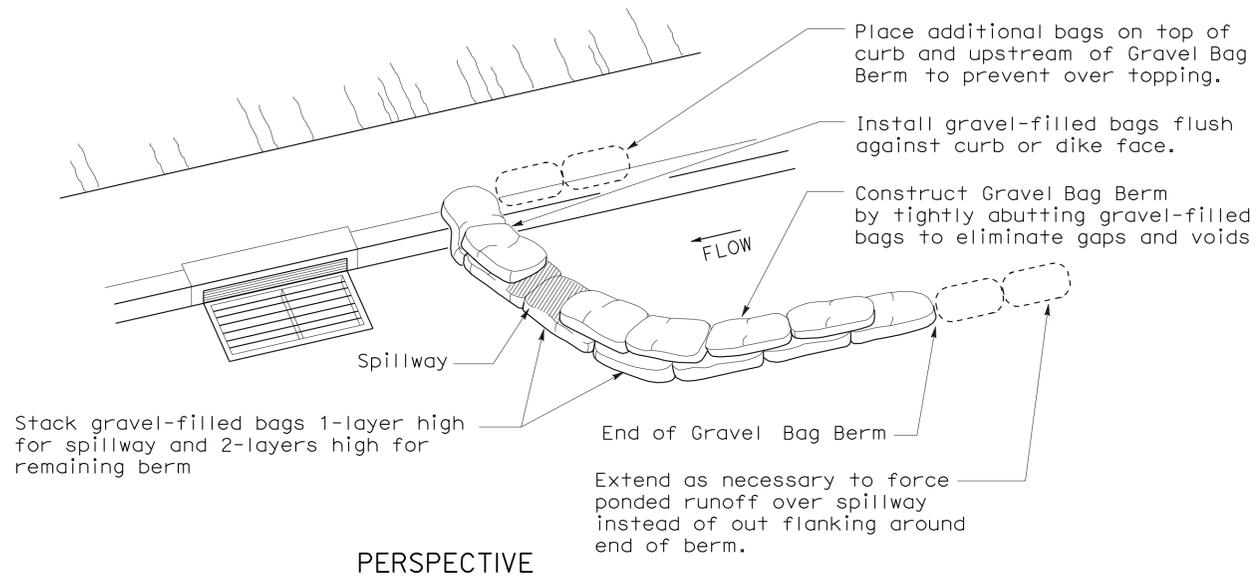
PLAN
CONFIGURATION FOR SAG POINT INLET (GRAVEL BAG BERM)



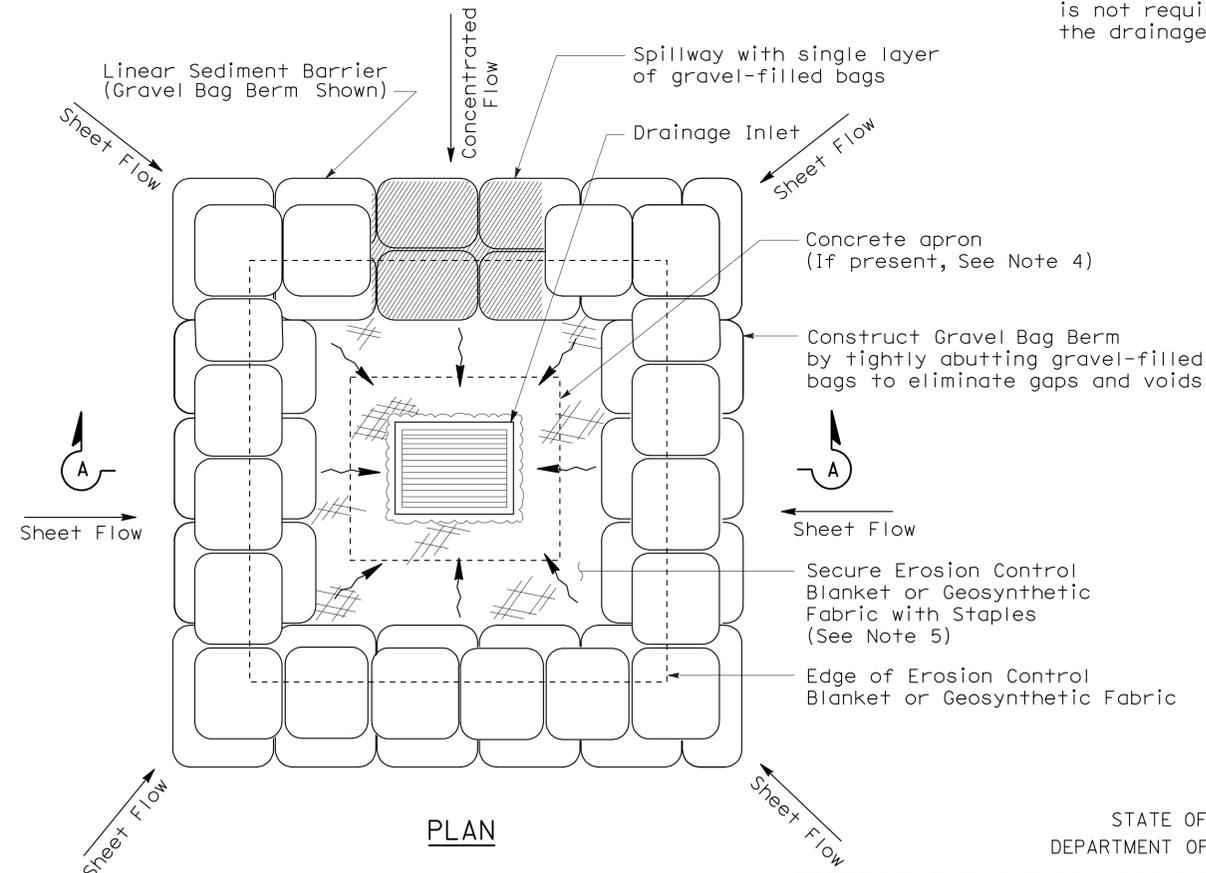
SECTION A-A

NOTES:

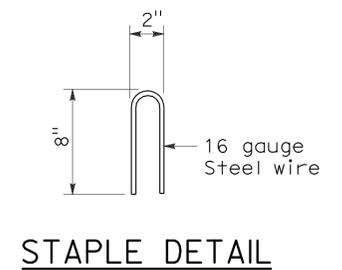
1. Place safety cones adjacent to drainage inlet protection.
2. Dimensions may vary to fit field conditions.
3. Install a minimum of 3 gravel bag berms upstream of each drainage inlet to be protected.
4. Position erosion control blanket or geosynthetic fabric at edge of concrete apron and secure in trench.
5. Erosion control blanket or geosynthetic fabric is not required if the area adjacent to the drainage inlet is vegetated or paved.



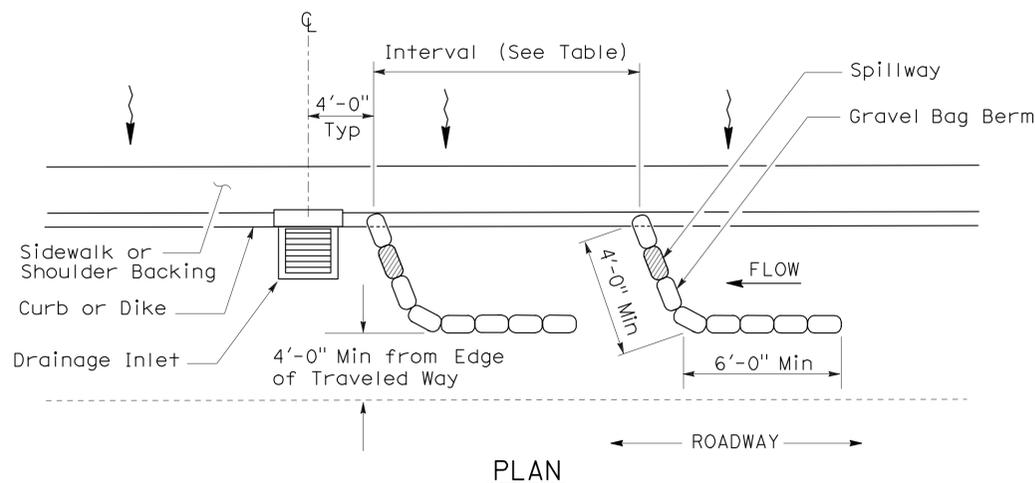
PERSPECTIVE



PLAN
TEMPORARY DRAINAGE INLET PROTECTION (TYPE 3B)



STAPLE DETAIL



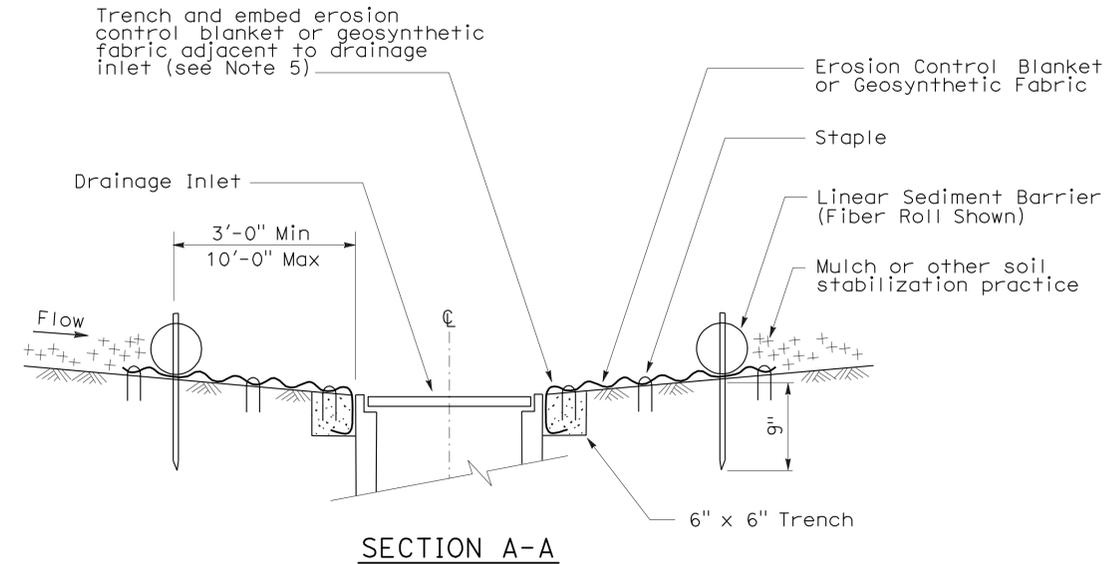
PLAN
TEMPORARY DRAINAGE INLET PROTECTION (TYPE 3A) (GRAVEL BAG BERM)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)

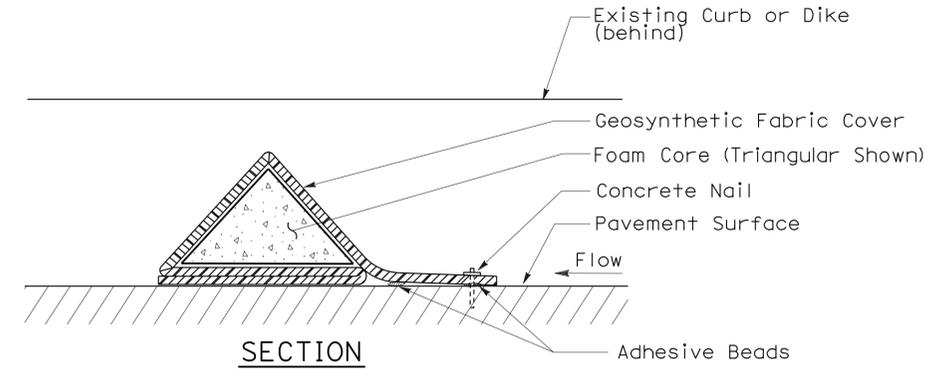
NO SCALE
NSP T62 DATED AUGUST 15, 2008 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

FLEXIBLE SEDIMENT BARRIER SPACING TABLE

SLOPE OF ROADWAY (PERCENT)	0 to 0.9	1 to 1.9	2 to 2.9	3 to 4	5+
INTERVAL BETWEEN BARRIERS	50'	35'	30'	25'	20'
ANGLE FROM FACE OF CURB	70°	70°	70°	45°	45°
SUGGESTED BARRIER LENGTH	6'	6'	6'	6'	6'



SECTION A-A

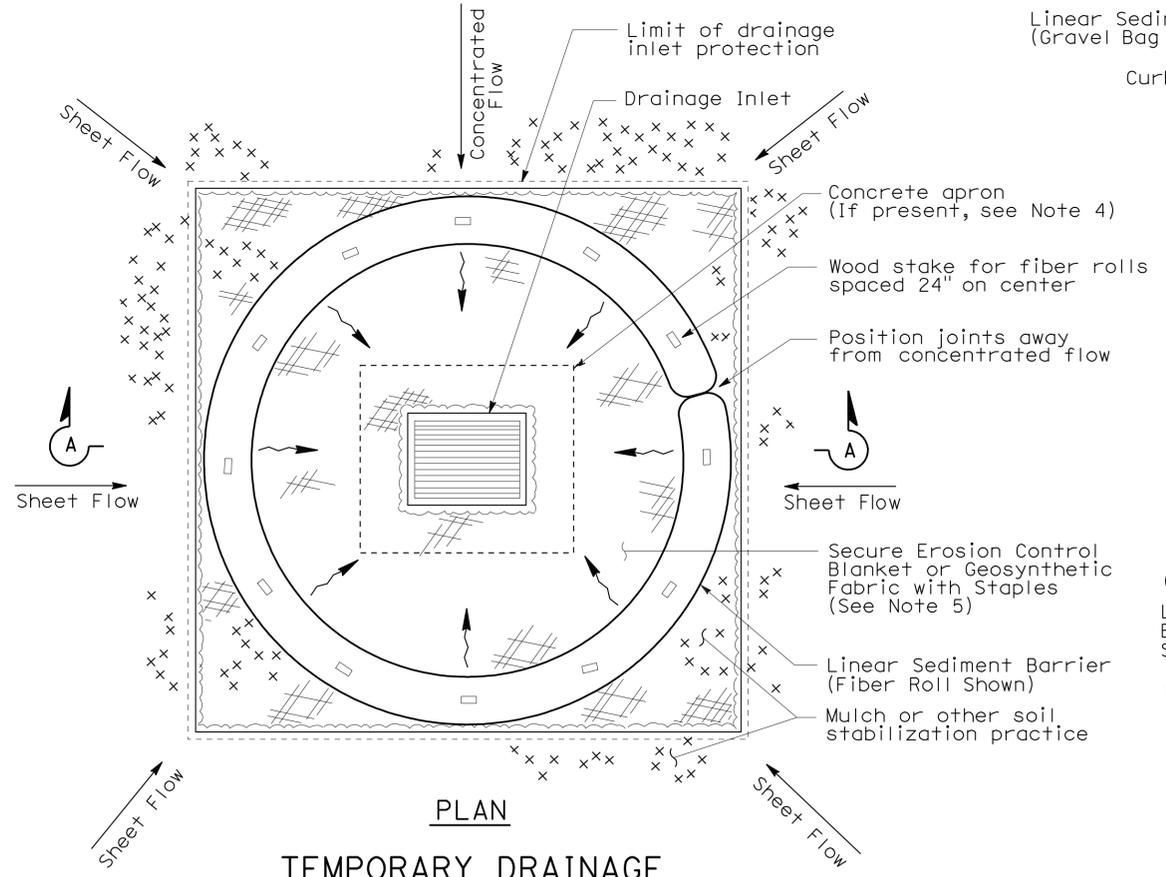


SECTION FLEXIBLE SEDIMENT BARRIER DETAIL (FOAM BARRIER SHOWN)

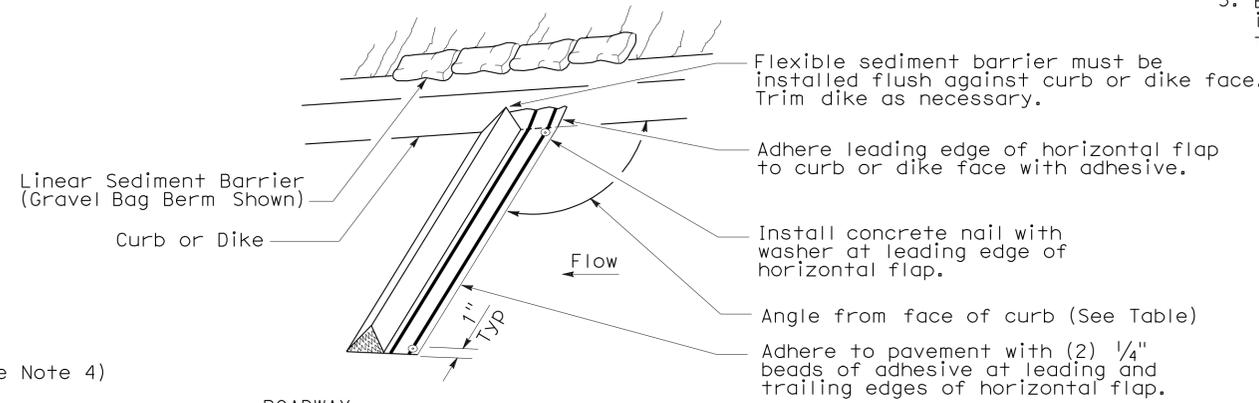
NOTES:

1. See Standard Plan T51 for Temporary Silt Fence.
2. Dimensions may vary to fit field conditions.
3. Install a minimum of 3 flexible sediment barriers upstream of each drainage inlet to be protected.
4. Position erosion control blanket or geosynthetic fabric at edge of concrete apron and secure in trench.
5. Erosion control blanket or geosynthetic fabric is not required if the area adjacent to the drainage inlet is vegetated.

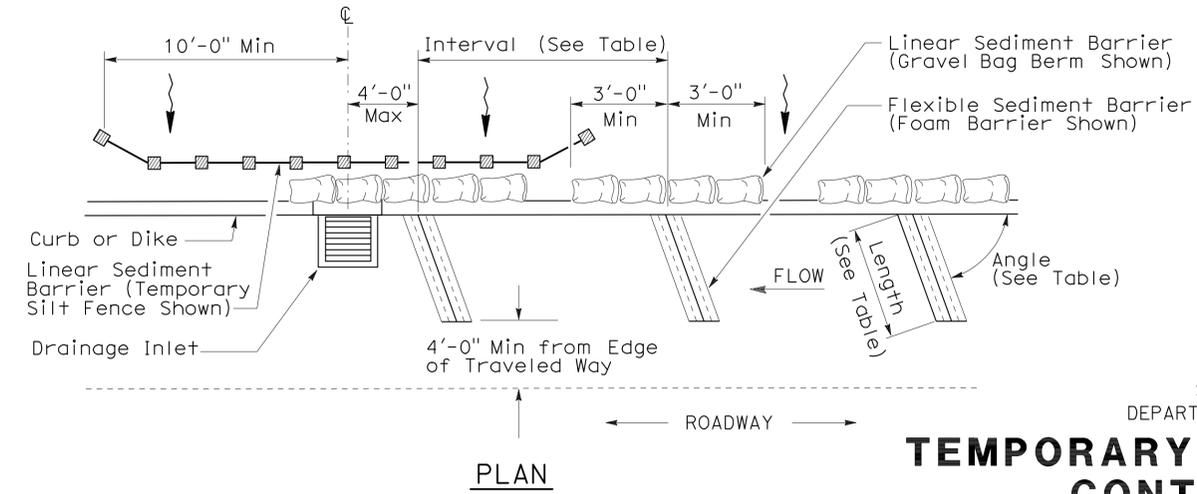
To accompany plans dated 3-7-11



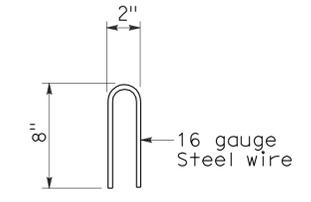
PLAN TEMPORARY DRAINAGE INLET PROTECTION (TYPE 4A)



PERSPECTIVE



PLAN TEMPORARY DRAINAGE INLET PROTECTION (TYPE 4B) FLEXIBLE SEDIMENT BARRIER



STAPLE DETAIL

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION TEMPORARY WATER POLLUTION CONTROL DETAILS (TEMPORARY DRAINAGE INLET PROTECTION)

NO SCALE
 NSP T63 DATED AUGUST 15, 2008 SUPPLEMENTS THE STANDARD PLANS BOOK DATED MAY 2006.

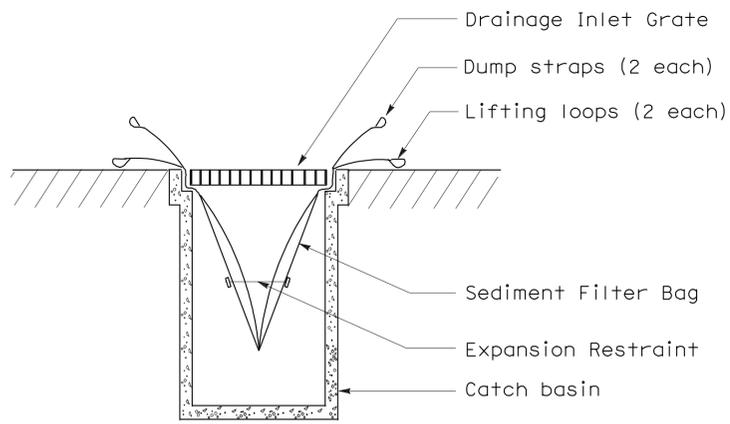
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	187	4.3	35	43

Robert B. Schott
 LICENSED LANDSCAPE ARCHITECT

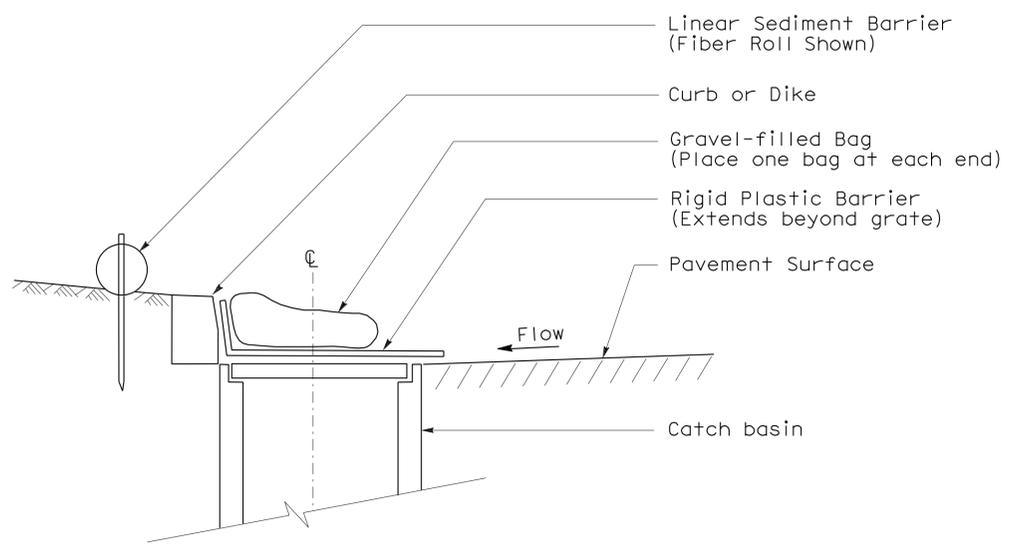
August 15, 2008
 PLANS APPROVAL DATE

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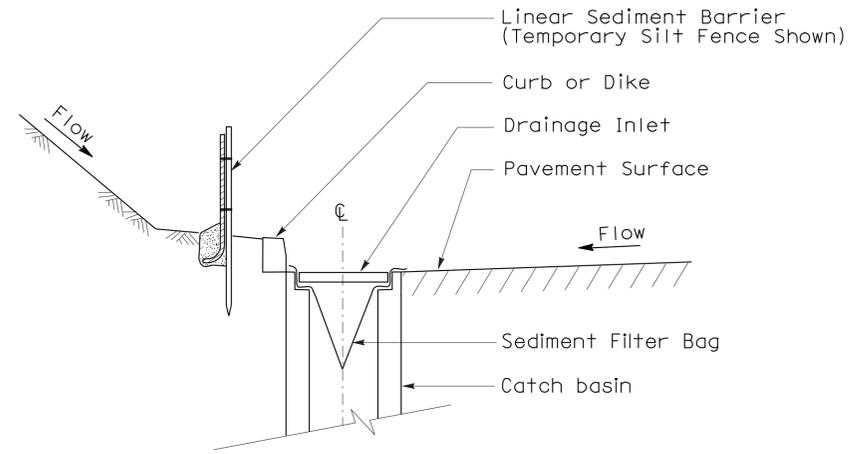
To accompany plans dated 3-7-11



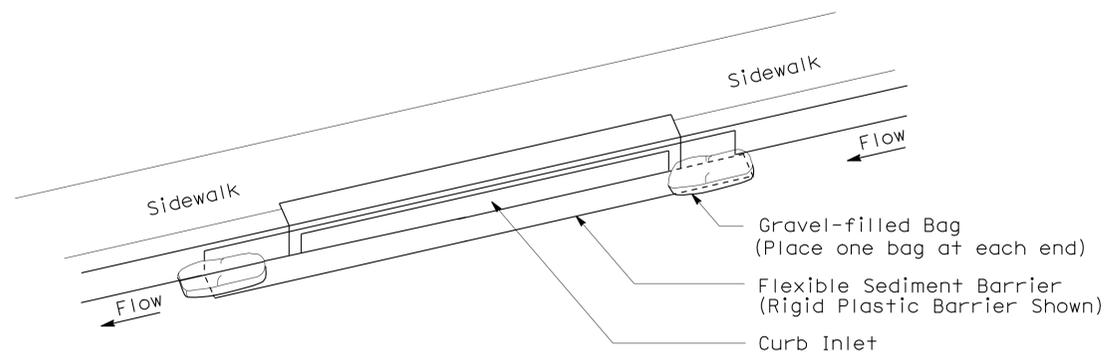
SECTION B-B
SEDIMENT FILTER BAG DETAIL



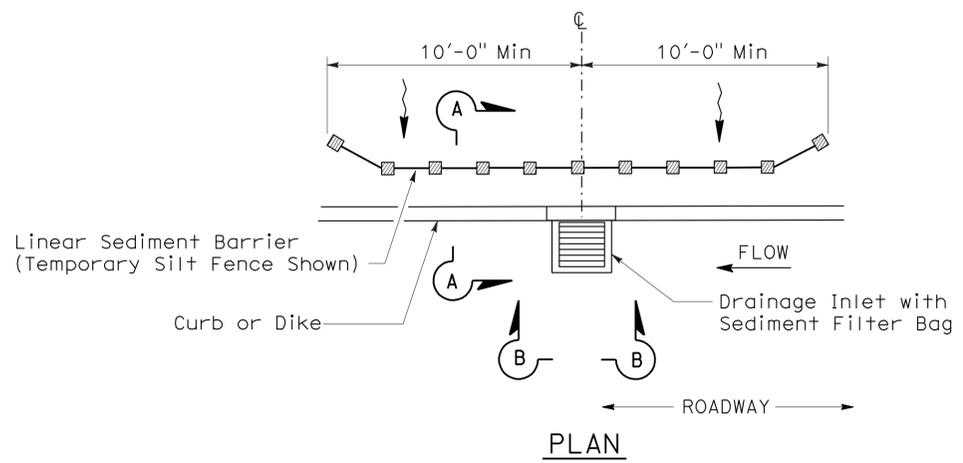
SECTION
TEMPORARY DRAINAGE INLET PROTECTION (TYPE 6A)
(CATCH BASIN WITH GRATE)



SECTION A-A



PERSPECTIVE
TEMPORARY DRAINAGE INLET PROTECTION (TYPE 6B)
(CURB INLET WITHOUT GRATE)



PLAN
TEMPORARY DRAINAGE INLET PROTECTION (TYPE 5)
(SEDIMENT FILTER BAG)

- NOTES:**
1. See Standard Plan T51 for Temporary Silt Fence.
 2. Dimensions may vary to fit field conditions.

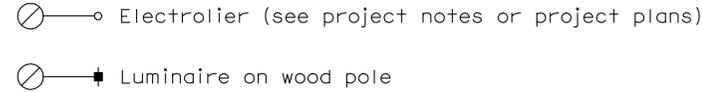
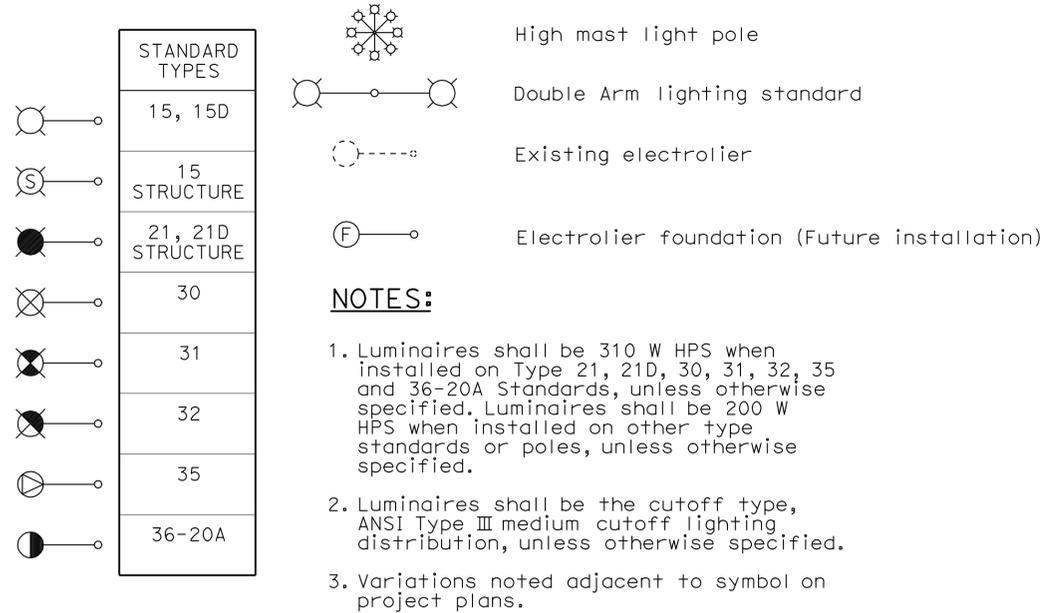
STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

TEMPORARY WATER POLLUTION CONTROL DETAILS
(TEMPORARY DRAINAGE INLET PROTECTION)
 NO SCALE
 NSP T64 DATED AUGUST 15, 2008 SUPPLEMENTS
 THE STANDARD PLANS BOOK DATED MAY 2006.

NEW STANDARD PLAN NSP T64

2006 NEW STANDARD PLAN NSP T64

ELECTROLIERS



STANDARD NOTES:

- AB** Abandon. If applied to conduit, remove conductors.
- BC** Install pull box in existing conduit run.
- BP** Pedestrian barricade, type as indicated on plan.
- CB** Install conduit into existing pull box.
- CC** Connect new and existing conduit. Remove existing conductors and install conductors as indicated.
- CF** Conduit to remain for future use. Remove conductors. Install pull wire or rope.
- DH** Detector handhole.
- FA** Foundation to be abandoned.
- IS** Install sign on signal mast arm.
- NS** No slip base on standard.
- PEC** Photoelectric control.
- PEU** Photoelectric unit.
- RC** Equipment or material to be removed and become the property of the Contractor.
- RE** Remove electrolier, fuses and ballast. Tape ends of conductors.
- RL** Relocate equipment.
- RR** Remove and reuse equipment.
- RS** Remove and salvage equipment.
- SC** Splice new to existing conductors.
- SD** Service disconnect.
- SF** Standard to remain for future use. Remove luminaire, pole conductors, fuses and ballast.
- TSP** Telephone service point.

ABBREVIATIONS AND EQUIPMENT DESIGNATIONS

PROPOSED EXISTING

PROPOSED	EXISTING	DESCRIPTION
BBS	bbs	Battery backup system
BC	bc	Bolt circle
C	C	Conduit
CCTV	cctv	Closed circuit television
CKT	ckt	Circuit
CMS	cms	Changeable message sign
DLC	dlc	Loop detector lead-in cable
EMS	ems	Extinguishable message sign
EVC	evc	Emergency vehicle cable
EVD	evd	Emergency vehicle detector
FB	fb	Flashing beacon
FBCA	fbca	Flashing beacon control assembly
FBS	fbs	Flashing beacon with slip base
FO	fo	Fiber optic
G	G	Ground (Equipment Grounding Conductor)
GFCI	GFCI	Ground fault circuit interrupt
HAR	har	Highway advisory radio
HEX	hex	Hexagonal
HPS	hps	High pressure sodium
IISNS	iisns	Internally illuminated street name sign
ISL	isl	Induction sign lighting
LED	led	Light emitting diode
LMA	lma	Luminaire mast arm
LPS	lps	Low pressure sodium
LTG	ltg	Lighting
LUM	lum	Luminaire
MAT	mat	Mast arm mounting vehicle signal faces, top attachment
MAS	mas	Mast arm mounting vehicle signal faces, side attachment
MAS-4A	mas-4A	Mast arm mounting vehicle signal faces, side attachment - 4 signal section
MAS-4B	mas-4B	Mast arm mounting vehicle signal faces, side attachment - 4 signal section
MAS-4C	mas-4C	Mast arm mounting vehicle signal faces, side attachment - 4 signal section
MAS-5A	mas-5A	Mast arm mounting vehicle signal faces, side attachment - 5 signal section
MAS-5B	mas-5B	Mast arm mounting vehicle signal faces, side attachment - 5 signal section
MC	mc	Mercury contactor
M/M	m/m	Multiple to multiple transformer
MT	mt	Conduit with pull wire or rope only
MTG	mtg	Mounting
	mv	Mercury vapor lighting fixture
N	N	Neutral (Grounded Conductor)
NC	NC	Normally closed
NO	NO	Normally open
PB	pb	Pull box
PEC	pec	Photoelectric control (Type I, II, III, IV or V as shown)
PED	ped	Pedestrian
PEU	peu	Photoelectric unit
PPB	ppb	Pedestrian push button
RL		Relocated equipment
RM	rm	Ramp metering
SB	sb	Slip base
SIC	sic	Signal interconnect cable
SIG	sig	Signal
SMA	sma	Signal mast arm
SNS	sns	Street name sign
SP	sp	Service point
TDC	tdc	Telephone demarcation cabinet
TMS	tms	Traffic monitoring station
TOS	tos	Traffic Operations System
VEH	veh	Vehicle
XFMR	xfmr	Transformer
COMM	comm	Communication
RWIS	rwis	Roadway weather information system

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	187	4.3	36	43

Jeffery G. McRae
REGISTERED ELECTRICAL ENGINEER

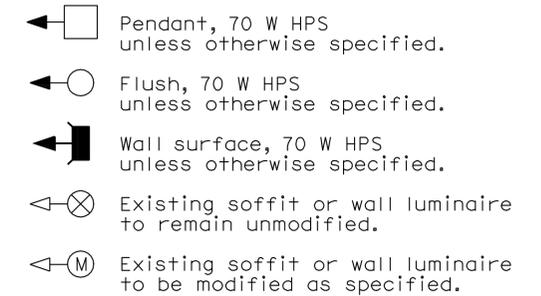
October 5, 2007
PLANS APPROVAL DATE

Jeffery G. McRae
No. E14512
Exp. 6-30-08
ELECTRICAL
STATE OF CALIFORNIA

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To accompany plans dated 3-7-11

SOFFIT AND WALL MOUNTED LUMINAIRES



NOTE:

Arrow indicates "street side" of luminaire.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

NO SCALE

RSP ES-1A DATED OCTOBER 5, 2007 SUPERSEDES STANDARD PLAN ES-1A DATED MAY 1, 2006 - PAGE 400 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1A

2006 REVISED STANDARD PLAN RSP ES-1A

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	187	4.3	37	43

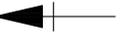
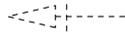
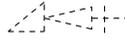
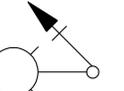
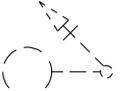
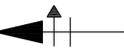
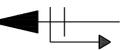
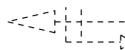
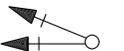
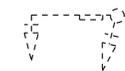
Jeffrey G. McRae
 REGISTERED ELECTRICAL ENGINEER
 October 5, 2007
 PLANS APPROVAL DATE
 Jeffrey G. McRae
 No. E14512
 Exp. 6-30-08
 ELECTRICAL
 STATE OF CALIFORNIA

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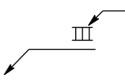
CONDUIT

PROPOSED	EXISTING	
---	---	Lighting Conduit, unless otherwise indicated or noted
---	---	Traffic signal conduit
-C-	-c-	Communication conduit
-T-	-t-	Telephone conduit
-F-	-f-	Fire alarm conduit
-FO-	-fo-	Fiber optic conduit
---	---	Conduit termination 
		Conduit riser in/on structure or service pole

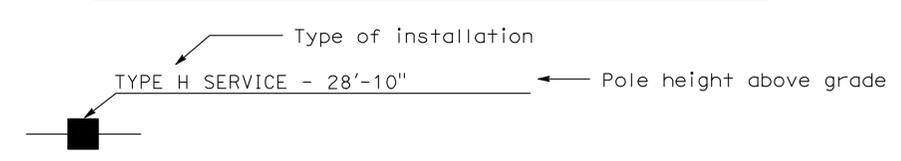
SIGNAL EQUIPMENT

PROPOSED	EXISTING	
		Pedestrian signal face
		Pedestrian push button post
		Pedestrian barricade
		Vehicle signal face (with backplate, 3-Section: red, yellow and green)
		Vehicle signal face with angle visors
		Modifications of basic symbols: "L" indicates all non-arrow sections louvered "LG" indicates louvered green section only "PV" indicates 12" programmed visibility sections "8" indicates all 8" sections (only when specified)
		Type 15TS and Vehicle signal face
		Vehicle signal face with red, yellow and green left arrow sections
		Vehicle signal face with red and yellow sections and up green arrow
		Vehicle signal face (5 Section) with red, yellow and green sections and yellow and green right arrows
		Type 1 Standard and attached vehicle signal faces
		Standard with signal mast arm only and attached vehicle signal faces and internally illuminated street name sign

SERVICE EQUIPMENT

PROPOSED	EXISTING	
---OH---	---oh---	Overhead lines
		Wood pole "U" indicates utility owned
		Pole guy with anchor
		Utility transformer - ground mounted
		Service equipment enclosure type
		Service equipment enclosure door indicates front of enclosure
		Telephone demarcation cabinet

POLE-MOUNTED SERVICE DESIGNATION



ILLUMINATED OVERHEAD SIGN

PROPOSED	EXISTING	
		Overhead sign - Single post
		Overhead sign - Two post
		Overhead sign - Mounted on structure
		Overhead sign with electrolier

SIGNAL EQUIPMENT Cont

PROPOSED	EXISTING	
		Guard post
		Type 1 Standard with "Meter On" sign
		Emergency Vehicle detector

NOTES:

- All signal sections shall be 12" unless shown otherwise.
- Signal heads shall be provided with backplates unless shown otherwise.
- Signal indication shall be LED.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (SYMBOLS AND ABBREVIATIONS)**
 NO SCALE

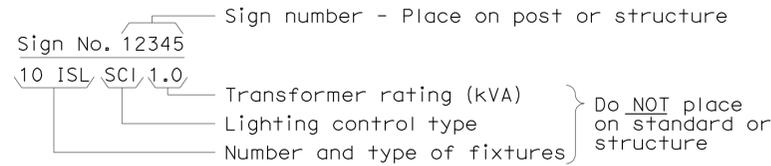
RSP ES-1B DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1B
 DATED MAY 1, 2006 - PAGE 401 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-1B

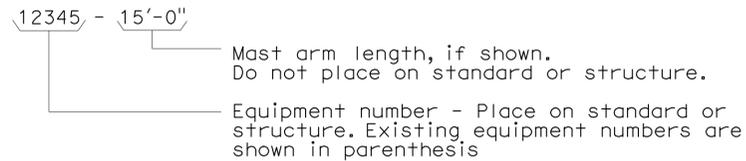
2006 REVISED STANDARD PLAN RSP ES-1B

EQUIPMENT IDENTIFICATION

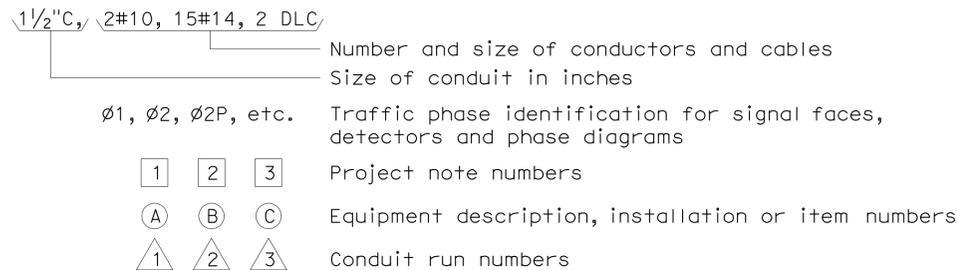
ILLUMINATED SIGN IDENTIFICATION NUMBER:



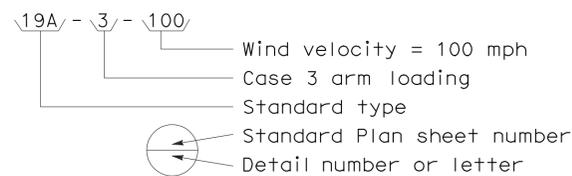
ELECTROLIER OR EQUIPMENT IDENTIFICATION NUMBER:



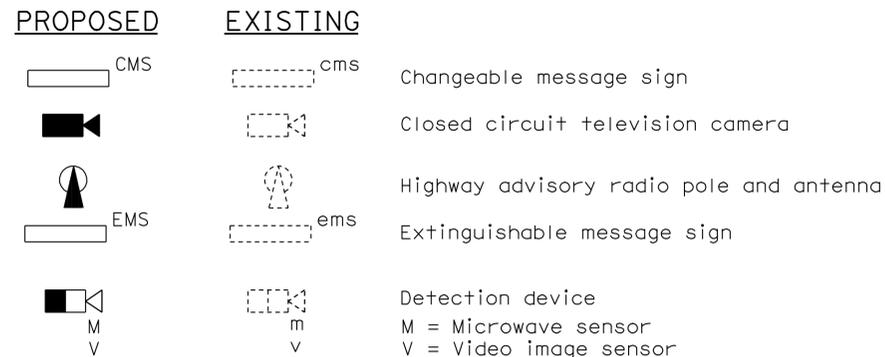
CONDUIT AND CONDUCTOR IDENTIFICATION:



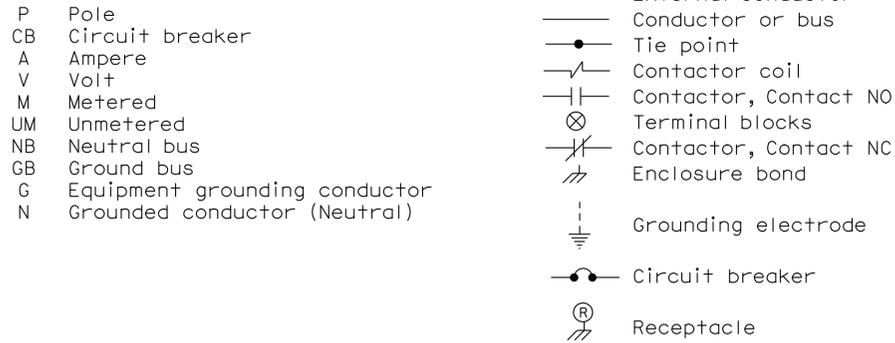
SIGNAL AND LIGHTING STANDARD (TYPICAL DESIGNATION):



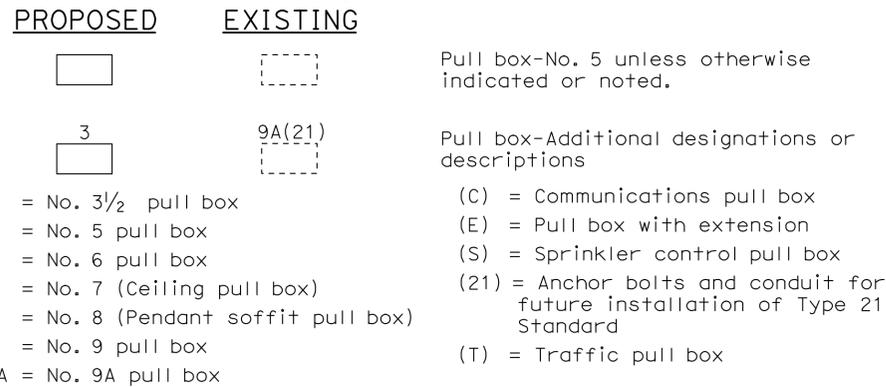
MISCELLANEOUS EQUIPMENT



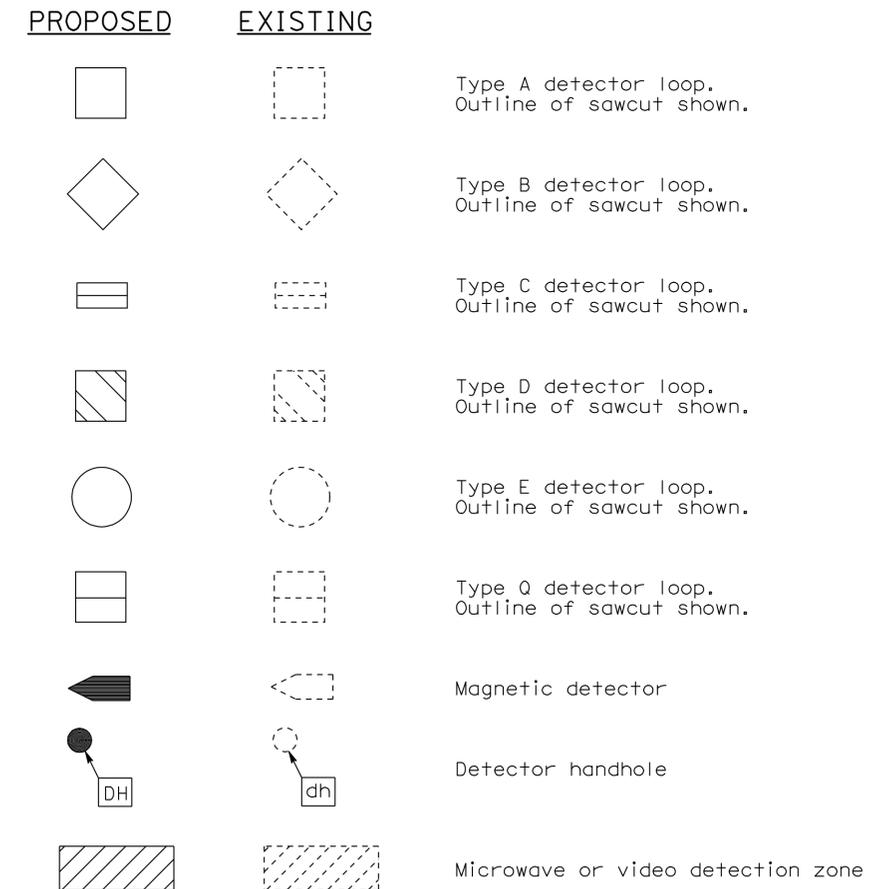
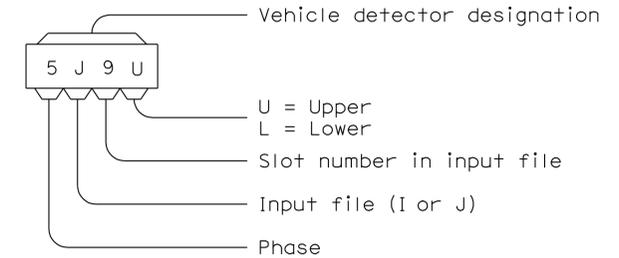
WIRING DIAGRAM LEGEND



PULL BOXES



VEHICLE DETECTORS



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

ELECTRICAL SYSTEMS (SYMBOLS AND ABBREVIATIONS)

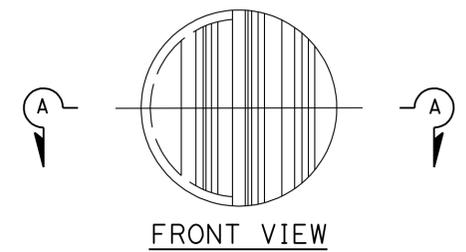
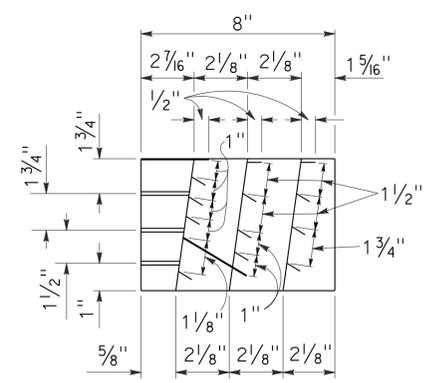
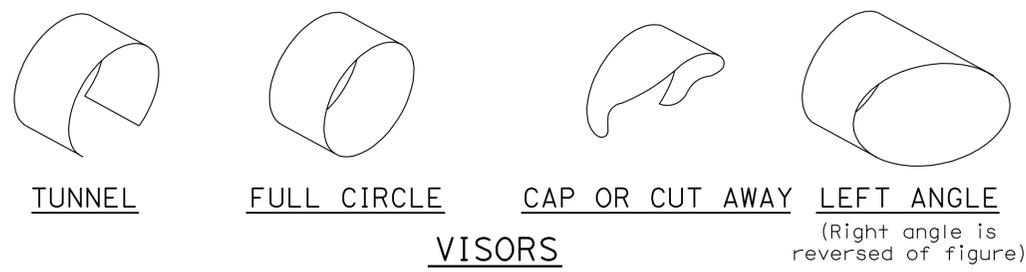
NO SCALE

RSP ES-1C DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-1C
 DATED MAY 1, 2006 - PAGE 402 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP ES-1C

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	187	4.3	39	43

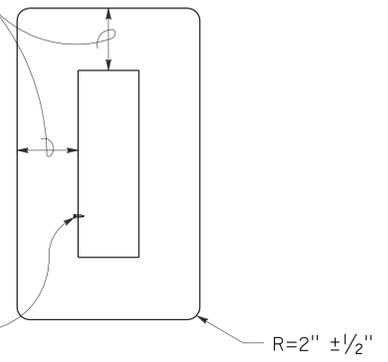
Jeffrey B. McRae
 REGISTERED ELECTRICAL ENGINEER
 June 6, 2008
 PLANS APPROVAL DATE
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 REGISTERED PROFESSIONAL ENGINEER
 Jeffrey G. McRae
 No. E14512
 Exp. 6-30-10
 ELECTRICAL
 STATE OF CALIFORNIA



DIRECTIONAL LOUVER

Directional louvers shall be oriented as directed by the Engineer and secured in place with one plated brass machine screw and nut.

8" ± 1/2" for 8" sections
 5 1/2" ± 1/2" for 12" sections

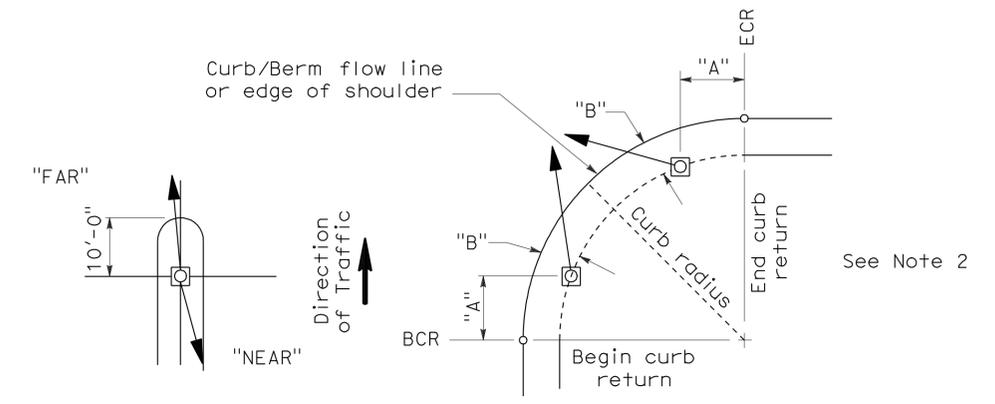


Drill signal face and attach backplate with six 10-24 or 10-32 self-tapping and locking stainless steel machine screws and flat washers

8" AND 12" SECTIONS

BACKPLATE

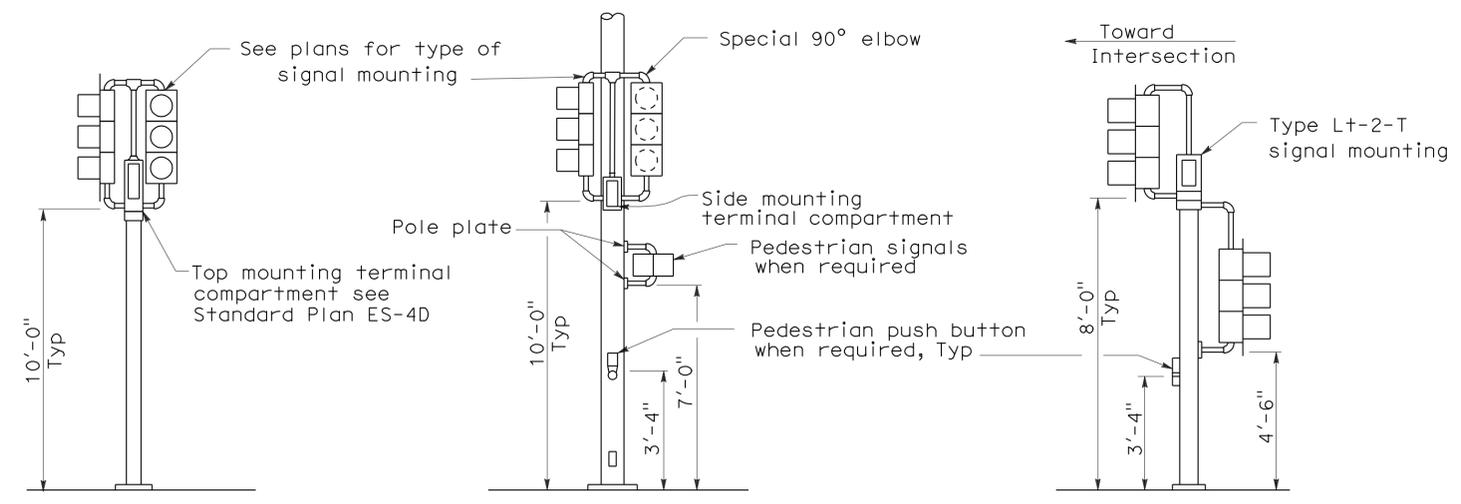
1/16" minimum thickness
 3001-14 aluminum, or plastic when specified



NOTES:

1. Typical signal pole placement unless dimensioned on plans.
2. For "A" and "B" dimensions, see Pole Schedule, or as directed by the Engineer.

SIGNAL STANDARD PLACEMENT DIMENSIONS AND EQUIPMENT LOCATIONS



TOP MOUNTED SIGNALS (TV)

Type 1-A, 1-B, 1-C and 1-D standard as indicated on the plans

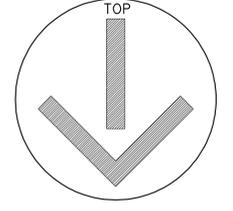
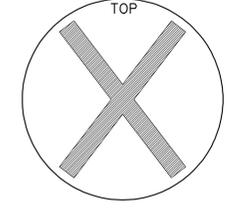
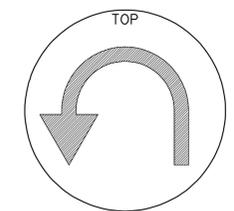
SIDE MOUNTED SIGNALS (SV AND SP)

Normally used on standards with luminaire or signal mast arm

LEFT TURN LANE SIGNAL

Type 1-A, 1-B, 1-C and 1-D standard as indicated on plans

TYPICAL SIGNAL INSTALLATIONS



STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS (SIGNAL HEADS AND MOUNTINGS)

NO SCALE

RSP ES-4C DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN ES-4C DATED MAY 1, 2006 - PAGE 420 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-4C

2006 REVISED STANDARD PLAN RSP ES-4C

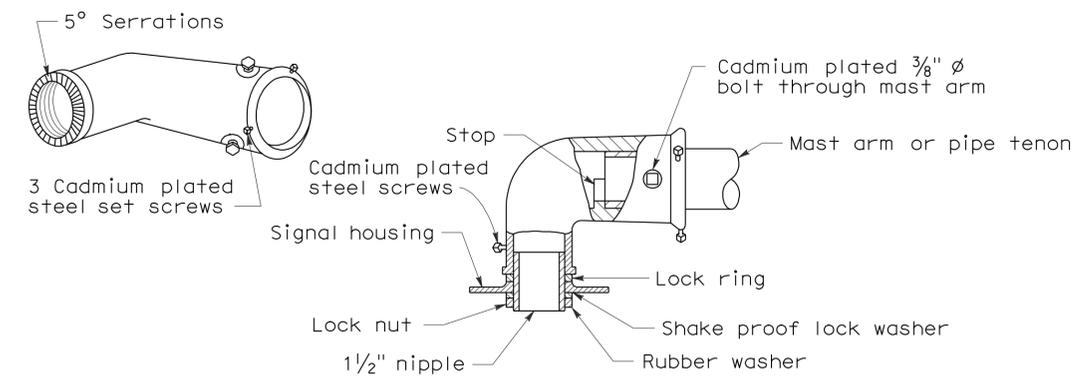
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	187	4.3	40	43

Jeffrey G. McRae
 REGISTERED ELECTRICAL ENGINEER
 No. E14512
 Exp. 6-30-10
 ELECTRICAL
 STATE OF CALIFORNIA

June 6, 2008
 PLANS APPROVAL DATE

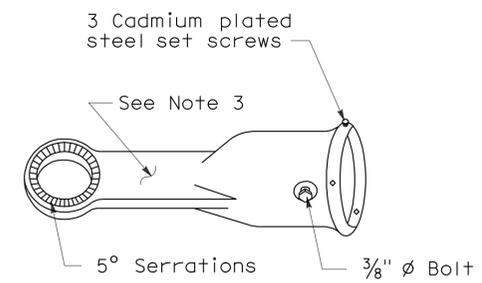
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To accompany plans dated 3-7-11



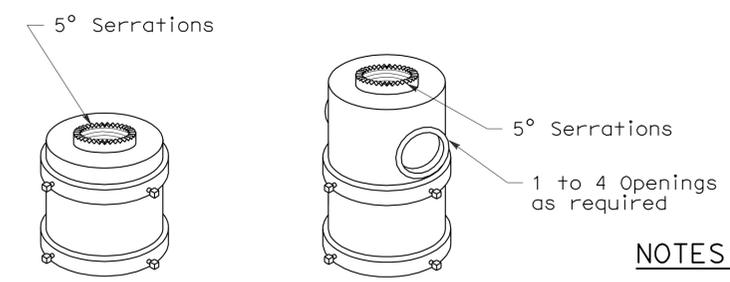
MAST ARM MOUNTING - TYPE "MAT"

For 2 NPS pipe, see Note 1.



MAST ARM MOUNTING - TYPE "MAS"

For 2 NPS pipe. See Note 1.

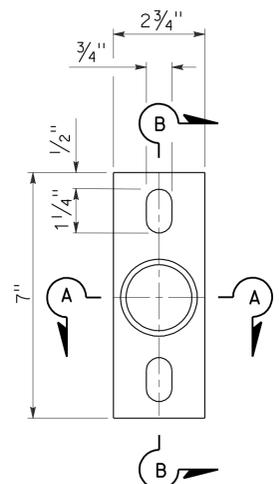


For one mounting For multiple mountings

TOP MOUNTINGS

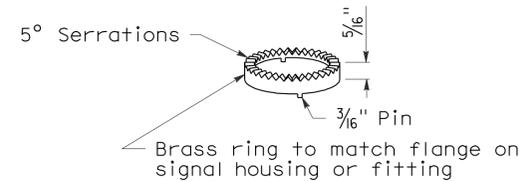
For 4 NPS pipe, see Note 2.

SIGNAL SLIP FITTERS



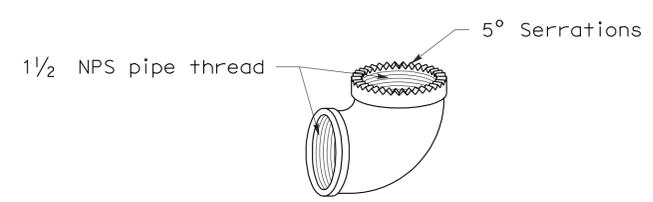
POLE PLATE

For side mountings



LOCK RING

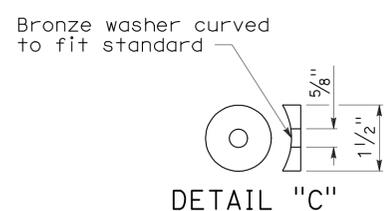
Use where locking ring is not integral with signal housing or fitting.



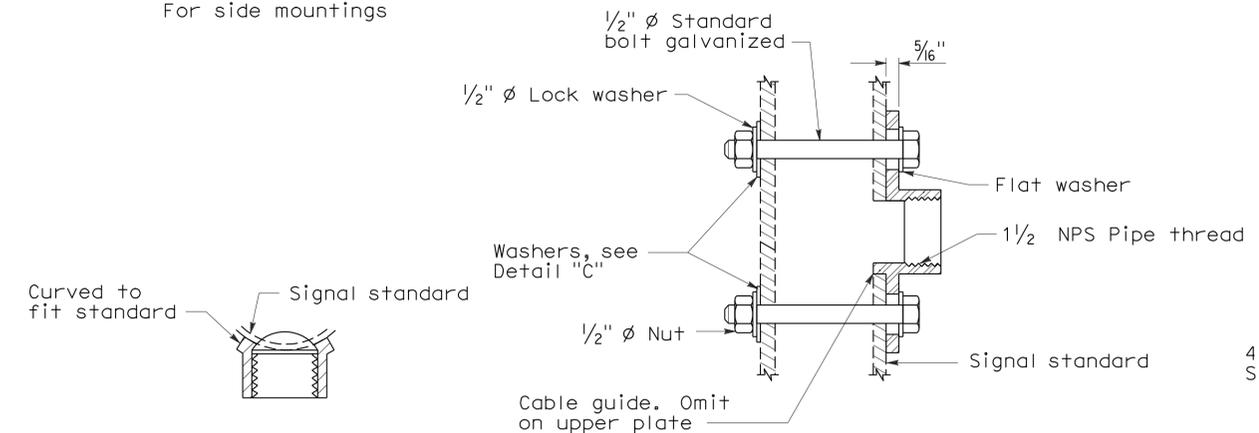
SPECIAL 90° ELBOW

One for each signal head, except those with special slip fitter mounting

MISCELLANEOUS MOUNTING HARDWARE



DETAIL "C"



SECTION A-A

SECTION B-B

TOP MOUNTING

SIDE MOUNTING

TERMINAL COMPARTMENTS

ELECTRICAL SYSTEMS (SIGNAL HEADS AND MOUNTINGS)

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

NO SCALE

RSP ES-4D DATED June 6, 2008 SUPERSEDES STANDARD PLAN ES-4D DATED MAY 1, 2006 - PAGE 421 OF THE STANDARD PLANS BOOK DATED MAY 2006.

REVISED STANDARD PLAN RSP ES-4D

2006 REVISED STANDARD PLAN RSP ES-4D

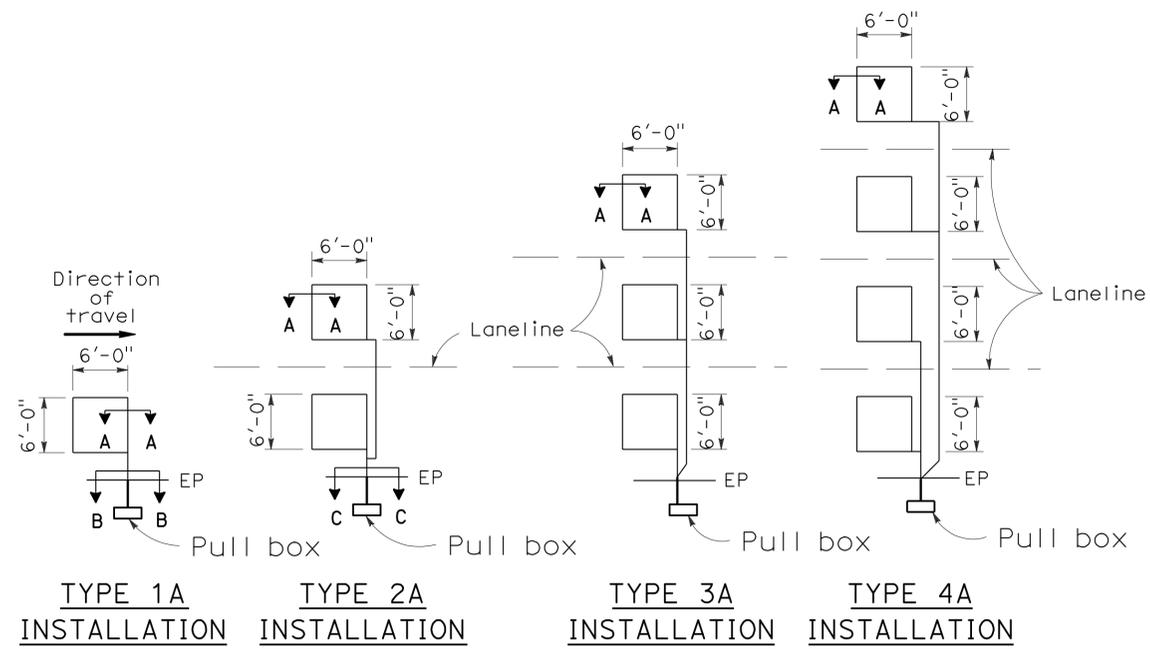
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	187	4.3	41	43

REGISTERED ELECTRICAL ENGINEER
 October 5, 2007
 PLANS APPROVAL DATE
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REGISTERED PROFESSIONAL ENGINEER
 Jeffrey G. McRae
 No. E14512
 Exp. 6-30-08
 ELECTRICAL
 STATE OF CALIFORNIA

LOOP INSTALLATION PROCEDURE

- Loops shall be centered in lanes.
- Saw slots in pavement for loop conductors as shown in details.
- Distance between side of loop and a lead-in saw cut from adjacent detectors shall be 2'-0" minimum. Distance between lead-in saw cuts shall be 6" minimum.
- Bottom of saw slot shall be smooth with no sharp edges.
- Slots shall be washed until clean, blown out and thoroughly dried before installing loop conductors.
- Adjacent loops on the same sensor unit channel shall be wound in opposite directions.
- Identify and tag loop circuit pairs in the pull box with loop number, start (S) and finish (F) of conductor. Identify and tag lead-in-cable with sensor number and phase.
- Install loop conductor in slot using a 3/16" to 1/4" thick wood paddle. Hold loop conductors with wood paddles (at the bottom of the sawed slot) during sealant placement.
- No more than 2 twisted pairs shall be installed in one sawed slot.
- Allow additional 5'-0" of slack length of conductor for the lead-in run to pull box.
- The additional length of each conductor for each loop shall be twisted together into a pair (6 turns per 3'-4" minimum) before being placed in the slot and conduit leading to pull box.
- Test each loop circuit for continuity, circuit resistance and insulation resistance at the pull box before filling slots.
- Fill slots as shown in details.
- Splice loop conductors to lead-in-cable. Splices shall be soldered.
- End of lead-in-cable and Type 2 loop conductor shall be waterproofed prior to installing in conduit to prevent moisture from entering the cable.
- Lead-in-cable shall not be spliced between the pull box and the controller cabinet terminals.
- Test each loop circuit for continuity, circuit resistance and insulation resistance at the controller cabinet location.
- Where loop conductors are not to be spliced to a lead-in-cable, the ends of the conductors shall be taped and waterproofed with electrical insulating coating.



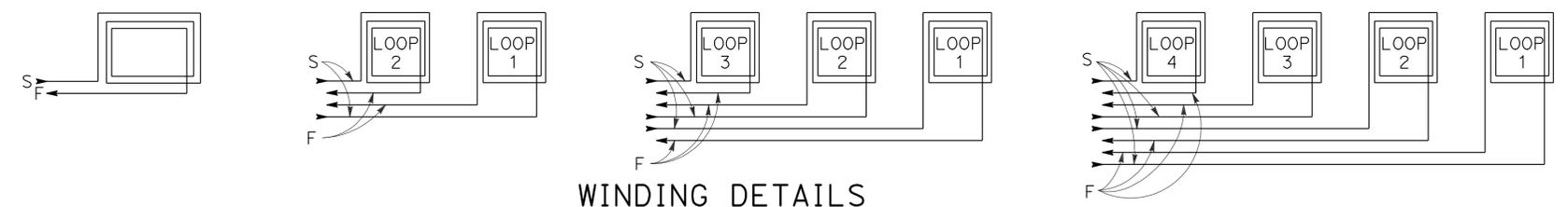
TYPE 1A INSTALLATION TYPE 2A INSTALLATION TYPE 3A INSTALLATION TYPE 4A INSTALLATION

SAWCUT DETAILS

(Type A loop detector configurations illustrated)

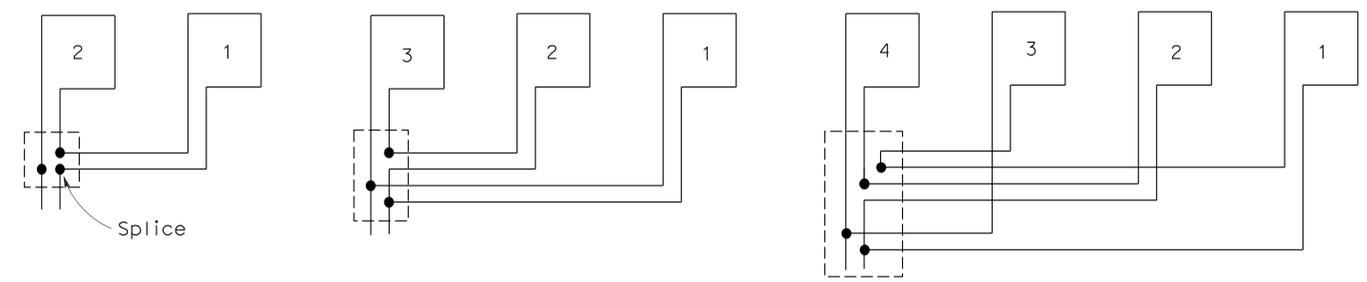
- 1A thru 4A = 1 Type A loop configuration in each lane.
 - 1B thru 4B = 1 Type B loop configuration in each lane.
 - 1C = 1 Type C loop configuration entering lanes as required.
 - 1D thru 4D = 1 Type D loop configuration in each lane.
 - 1E thru 4E = 1 Type E loop configuration in each lane.
 - 1Q thru 4Q = 1 Type Q loop configuration in each lane.
- (Use Type A, B, C, D, E or Q loop detector configurations only when specified or shown on plans)

To accompany plans dated 3-7-11



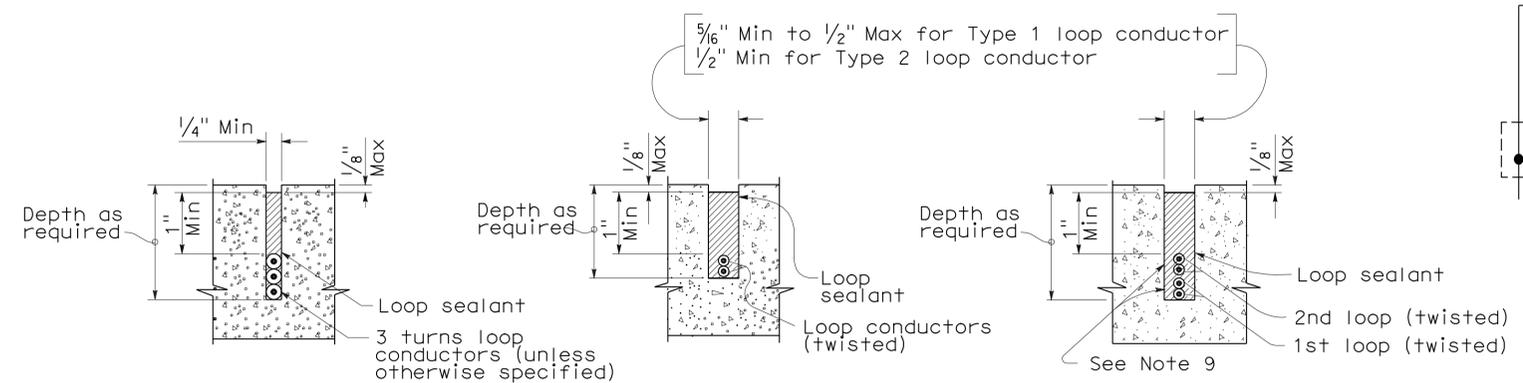
WINDING DETAILS

See Notes 6 and 7



TYPICAL LOOP CONNECTIONS

(Dashed lines represent the pull box)



SECTION A-A SECTION B-B SECTION C-C
 SLOT DETAILS - TYPE 1 AND TYPE 2 LOOP CONDUCTOR

ELECTRICAL SYSTEMS (DETECTORS)

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION

NO SCALE

RSP ES-5A DATED OCTOBER 5, 2007 SUPERCEDES STANDARD PLAN ES-5A
 DATED MAY 1, 2006 - PAGE 423 OF THE STANDARD PLANS BOOK DATED MAY 2006.

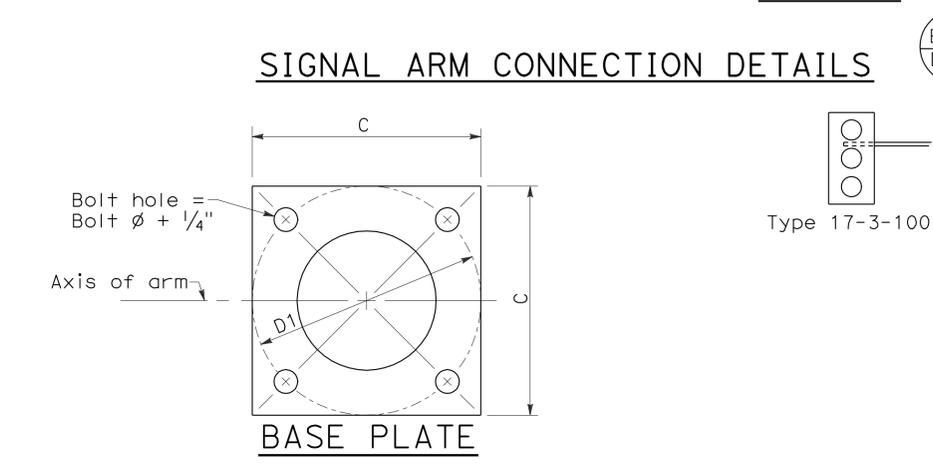
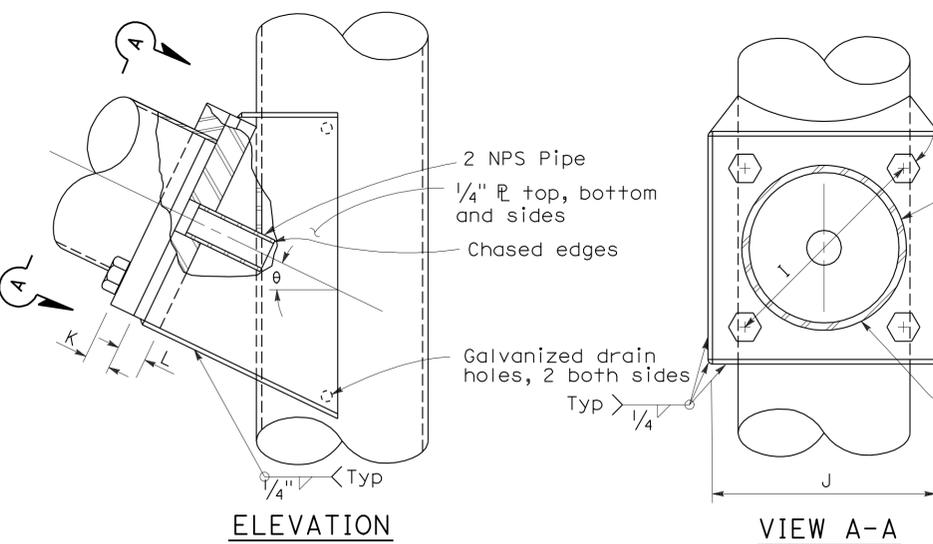
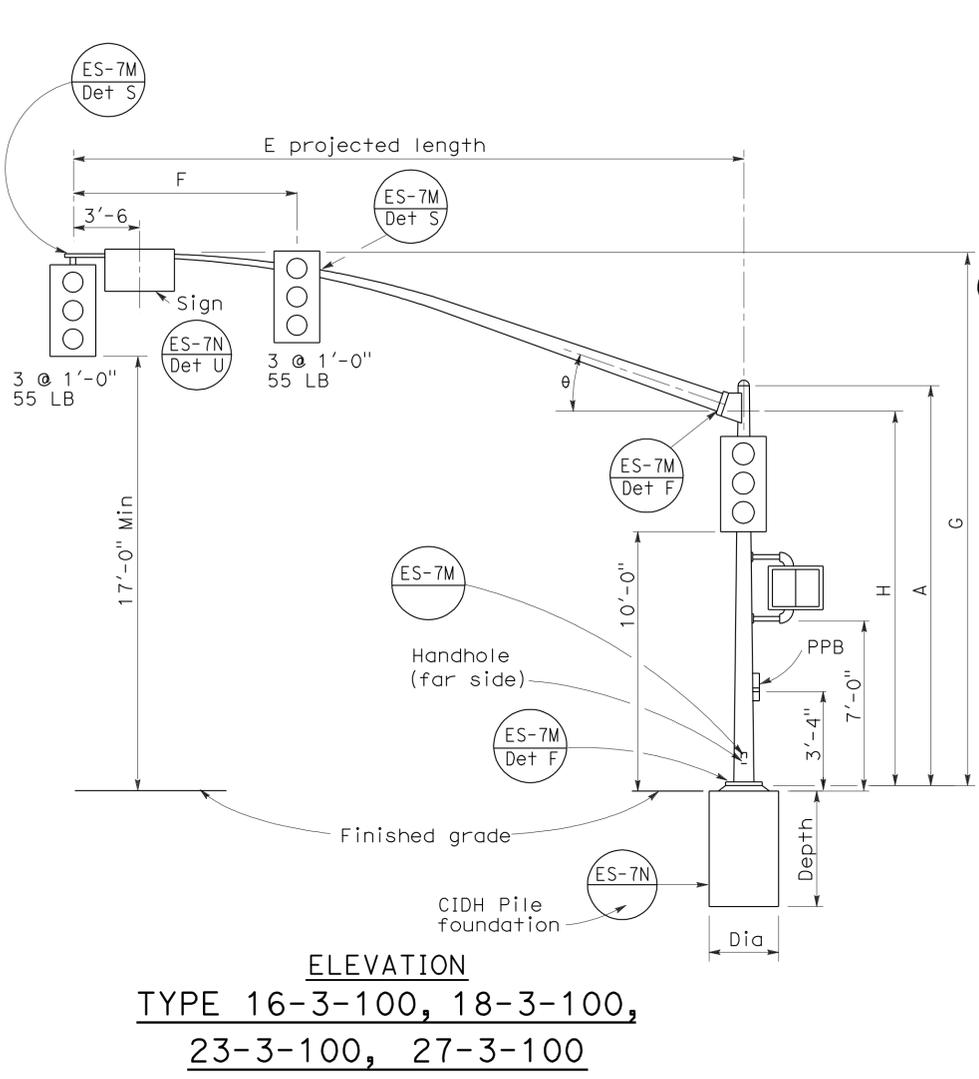
REVISED STANDARD PLAN RSP ES-5A

2006 REVISED STANDARD PLAN RSP ES-5A

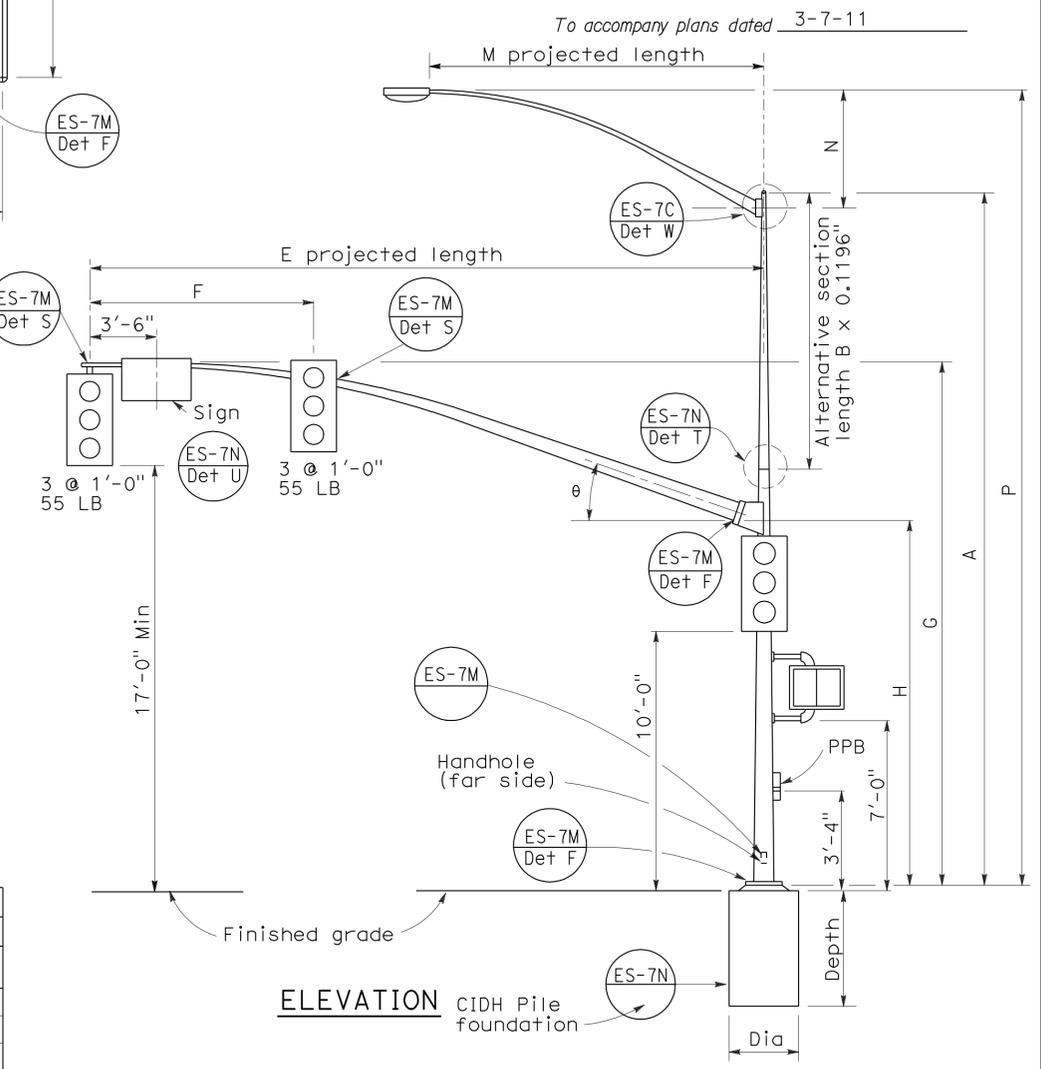
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	LA	187	4.3	42	43

REGISTERED CIVIL ENGINEER
 Jeffrey B. Woody
 No. C41260
 Exp. 3-31-07
 CIVIL
 STATE OF CALIFORNIA

June 30, 2006
 PLANS APPROVAL DATE
 The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



ELEVATION
 TYPE 16-3-100, 18-3-100,
 23-3-100, 27-3-100



ELEVATION
 TYPE 17-3-100, 24A-3-100,
 19-3-100, 26-3-100,
 19A-3-100, 26A-3-100, 24-3-100

E Projected Length	F Min Spacing	G Mounting Height	H	Min OD At Pole	Thickness	I Bolt Circle	HS Cap Screws	J Plate Size	K Arm R Thickness	L Pole R Thickness	theta
15'-0"	8'-0"	21'-8"±	17'-6"	6 5/8"	0.1793"	12"	1 1/4"-7NC-3"	1'-0"	1 1/4"	1 1/2"	23°
20'-0"		21'-8"±	7"								
25'-0"	12'-0"	22'-8"±	7 5/8"								
30'-0"			8"								
35'-0"	14'-0"	23'-0"±	16'-0"	8 3/4"	0.2391"	13"	1'-1"	1 1/2"	1 3/4"	21°	
40'-0"	15'-0"		9 3/8"								
45'-0"		23'-8"±	10 1/16"								

M Projected Length	N Rise	Min OD at Pole	Thickness	P Mounting Height Pole	P Mounting Height Pole
6'-0"	2'-0"±	3 1/4"	0.1196"	31'-6"±	36'-6"±
8'-0"	2'-6"±	3 1/2"		32'-0"±	37'-0"±
10'-0"	3'-3"±	3 7/8"	0.1196"	32'-9"±	37'-9"±
12'-0"	4'-3"±			33'-9"±	38'-9"±
15'-0"	4'-9"±	4 1/4"		34'-3"±	39'-3"±

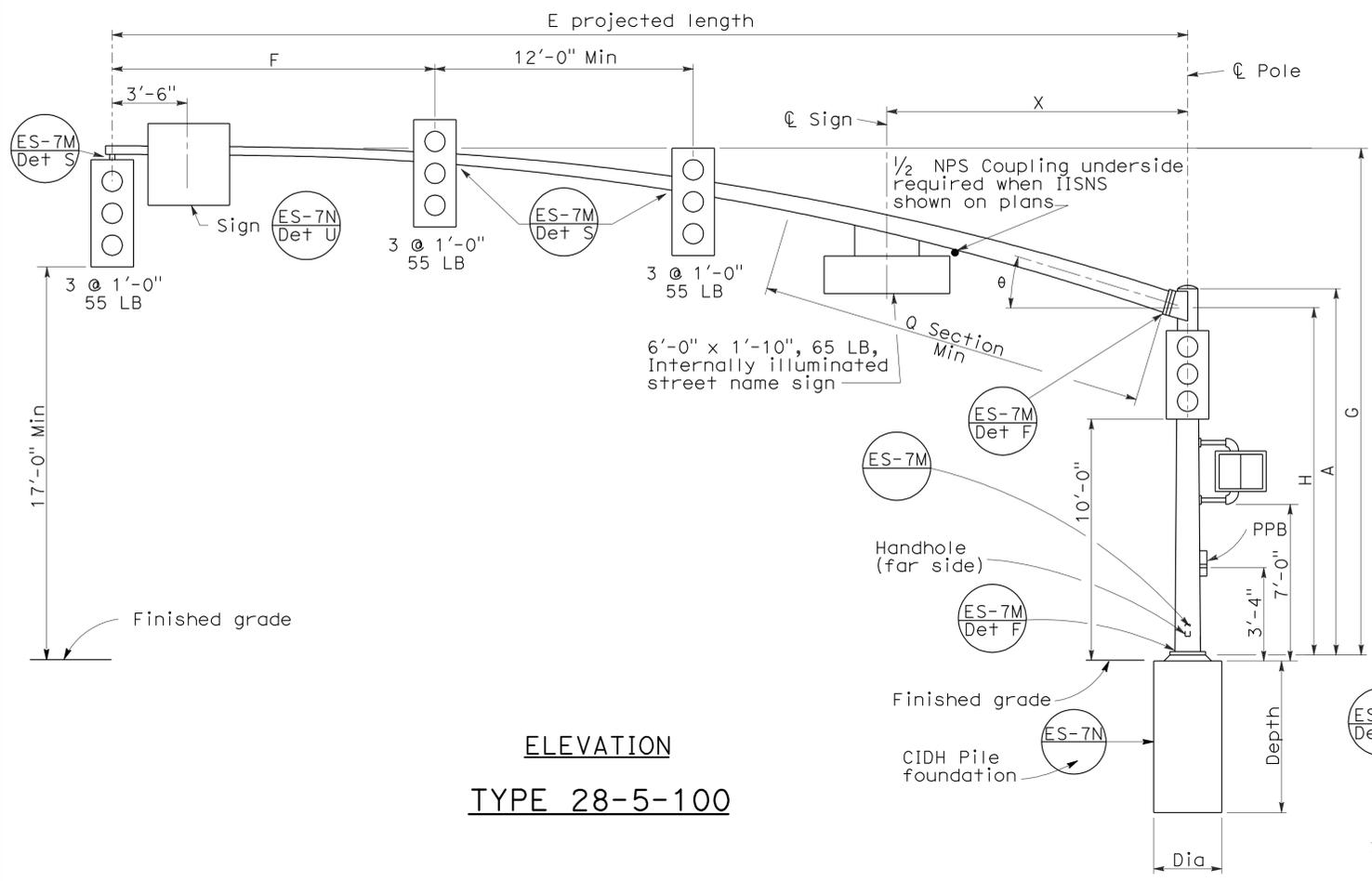
Pole Type	Load Case	Wind Velocity mph	POLE DATA				BASE PLATE DATA				Luminaire Arm	Signal Arm	CIDH PILE FOUNDATION					
			A Height	Min OD		Thickness	Alternative Section			C			D1 Bolt Circle	Thickness	Anchor Bolts Size	Diameter	Depth	Reinforced
				Base	Top		B Length	Bottom	Top									
16-3-100	3	100	18'-6"	10 3/4"	8 1/4"	0.1793"	None	8"	7 5/8"	1'-6"	1'-5 1/2"	1 1/2"	2"ø x 42" x 6"	3'-0"	9'-0"	Yes		
17-3-100			30'-0"		6 5/8"		10'-0"		7 5/8"									
18-3-100			17'-0"	8 7/16"	None													
19-3-100			30'-0"	7 7/8"	10'-0"	7 7/8"												
19A-3-100			35'-0"	7 3/16"	15'-0"	9 1/4"												
23-3-100			17'-0"	9 5/8"	None													
24-3-100			30'-0"	7 7/8"	10'-0"	9 1/4"												
24A-3-100			35'-0"	7 3/16"	15'-0"	7 3/16"												
26-3-100			30'-0"	8"	10'-0"	8"												
26A-3-100			35'-0"	7 5/16"	15'-0"	9 3/8"												
27-3-100			17'-0"	9 3/4"	None													

□ Indicates arm length to be used unless otherwise noted on plans.

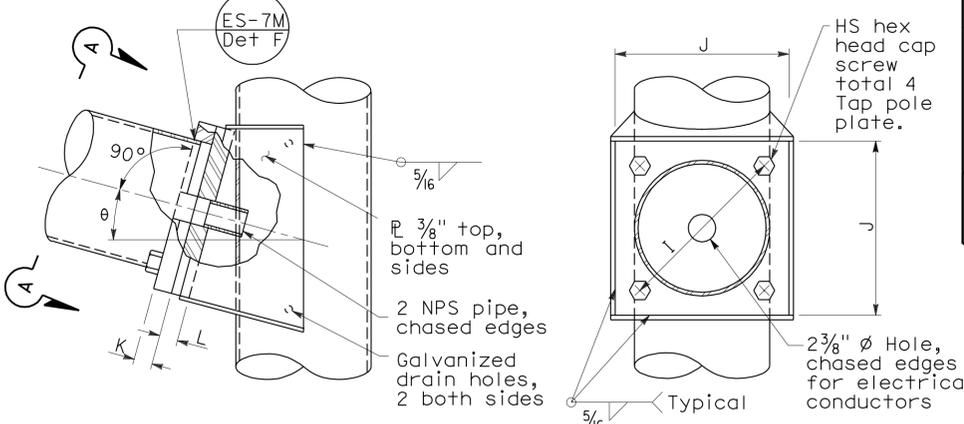
REVISED STANDARD PLAN RSP ES-7E

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
**ELECTRICAL SYSTEMS
 (SIGNAL AND LIGHTING STANDARD
 CASE 3 ARM LOADING
 WIND VELOCITY=100 MPH
 ARM LENGTHS 15' TO 45')**
 NO SCALE
 RSP ES-7E DATED JUNE 30, 2006 SUPERSEDES STANDARD PLAN DATED MAY 1, 2006 -
 PAGE 441 OF THE STANDARD PLANS BOOK DATED MAY 2006.

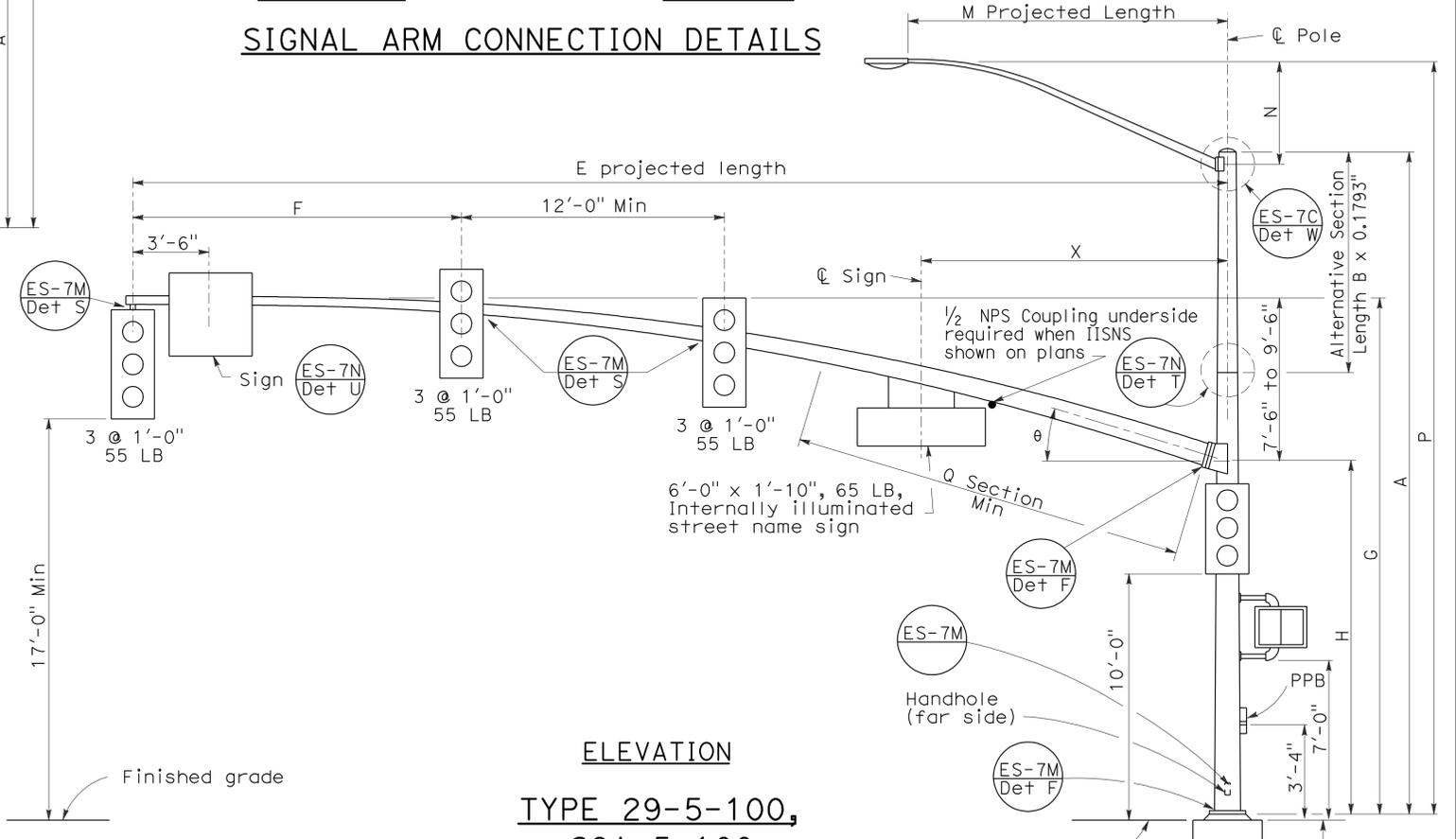
2006 REVISED STANDARD PLAN RSP ES-7E



ELEVATION
TYPE 28-5-100

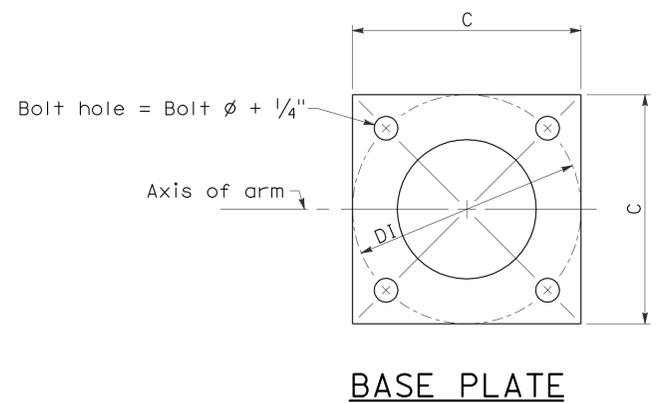


ELEVATION
SIGNAL ARM CONNECTION DETAILS



ELEVATION
TYPE 29-5-100,
29A-5-100

M Projected Length	N Rise	Min OD at Pole	Thickness	P Mounting Height
6'-0"	2'-0"±	3 1/4"	0.1196"	30'-0" Pole
8'-0"	2'-6"±	3 1/2"		31'-6"±
10'-0"	3'-3"±	3 7/8"		32'-0"±
12'-0"	4'-3"±			32'-9"±
15'-0"	4'-9"±	4 1/4"		33'-9"±
				35'-0" Pole
				36'-6"±
				37'-0"±
				37'-9"±
				38'-9"±
				39'-3"±



BASE PLATE

E Projected Length	F Min Spacing	G Mounting Height	H	Min OD at Pole	Thickness	I Bolt Circle	HS Cap Screws	J Plate Size	K Arm P Thickness	L Pole P Thickness	θ	Q Section		X Max
												Length	Thickness	
50'-0"	15'-0"	23'-7"± to 25'-7"±	16'-0"	11 7/16"	0.1793"	16"	1 1/2"-6NC-3 1/4"	1'-4"	1 3/4"	1 3/4"	15°	18'-0"	0.2391"	14'-0"
55'-0"		1'-1/4"		23'-0"										

Pole Type	Load Case	Wind Velocity mph	POLE DATA					BASE PLATE DATA				Luminaire Arm	Signal Arm	CIDH PILE FOUNDATION				
			A Height	Min OD		Thickness	Alternative Section			C	DI Bolt Circle			Thickness	Anchor Bolts Size	Dia	Depth	Reinforced
				Base	Top		B Length	Bottom	Top									
28-5-100	5	100	17'-0"	14"	11 11/16"	None			21"	21"	1 3/4"	2" ø x 42" x 6"	6'-15'	15'-0"	50'-0", 55'-0"	3'-0"	9'-2"	Yes
29-5-100			30'-0"		9 7/8"	10'-0"	11 1/4"	9 7/8"										
29A-5-100			35'-0"		9 3/16"	15'-0"	9 3/16"											

□ Indicates arm length to be used unless otherwise noted on plans.

STATE OF CALIFORNIA
 DEPARTMENT OF TRANSPORTATION
ELECTRICAL SYSTEMS
(SIGNAL AND LIGHTING STANDARD
CASE 5 ARM LOADING
WIND VELOCITY=100 MPH,
ARM LENGTHS 50' TO 55')
 NO SCALE

RSP ES-7G DATED NOVEMBER 17, 2006 SUPERSEDES STANDARD PLAN ES-7G
 DATED MAY 1, 2006 - PAGE 443 OF THE STANDARD PLANS BOOK DATED MAY 2006.

2006 REVISED STANDARD PLAN RSP ES-7G